



IPC

MANUEL D'INSTRUCTIONS ET DE MAINTENANCE

ASPIRATEUR INDUSTRIEL ELECTRIQUE
POUR LA RÉCUPÉRATION DES POUSSIÈRES UNIQUEMENT
MODÈLE ANTISTATIQUE AVEC MISE À LA TERRE:

PLANET 22 S ATEX

APPAREIL DE LA CLASSE DE POUSSIÈRE « H »



Ex h tc IIIC T200°C Dc IP6X

IP Cleaning S.r.l.
via E.Fermi,2
CASTELVERDE (CR) - ITALY
<http://www.ipcworldwide.com>

**VEUILLEZ LIRE ATTENTIVEMENT
ET SUIVRE TOUTES LES INSTRUCTIONS
DE CE MANUEL AVANT TOUT NETTOYAGE OU MISE EN SERVICE
IMPORTANT - CONSERVEZ CES INSTRUCTIONS**

TABLE DES MATIERES

1.0 INSPECTION	3
2.0 APPLICATIONS.....	3
3.0 MESURES DE SECURITE IMPORTANTES	5
4.0 DIRECTIVES AVANT LA MISE EN MARCHÉ ET MESURES DE SECURITE IMPORTANTES	8
5.0 MESURES DE SECURITE A PRENDRE POUR LA RECUPERATION DE MATIERES TOXIQUES OU NUISIBLES.....	10
6.0 DIRECTIVES POUR LA MISE A LA TERRE	11
7.0 VERIFICATION DE LA MISE A LA TERRE	12
8.0 SYSTÈME DE FILTRATION.....	13
9.0 CONSIGNES D'UTILISATION POUR LA RECUPERATION DES POUSSIÈRES 14	
10.0 NETTOYAGE ET MAINTENANCE DE L'ASPIRATEUR.....	15
11.0 ASSEMBLAGE ET REMPLACEMENT DES FILTRES HEPA	16
12.0 ENTREPOSAGE	19
13.0 SPECIFICATIONS TECHNIQUES	19
14.0 DIAGNOSTIC DE PANNE	20
15.0 DECLARATION DE CONFORMITE UE	21
16.0 ANNEXES	22

1.0 INSPECTION

Déballez et inspectez soigneusement votre aspirateur IPCLEANING afin de vous assurer qu'il n'a subi aucun dommage lors du transport. Nous réalisons tous les tests requis ainsi qu'une inspection complète de chacun de nos aspirateurs avant leur expédition. Si des dommages sont constatés ils sont dus

2.0 APPLICATIONS

AVERTISSEMENT: Pour la récupération des poussières dans les zones à risques l'utilisateur doit mener une analyse des risques. Les recommandations ci-dessous ne peuvent en aucun cas remplacer une analyse des risques de l'utilisateur

Le modèle PLANET 22 S ATEX de IPCLEANING est un aspirateur industriel électrique antistatique avec mise à la terre pour une utilisation dans les zones à risques classées ATEX zone 22 (poussières).

Le modèle PLANET 22 S ATEX est certifié groupe II et catégorie 3 conformément à la directive ATEX 2014/34/UE. L'aspirateur porte le marquage suivant:

  II 3 D
Ex h tc IIIC T200°C Dc IP6X

Cet équipement a fait l'objet d'un contrôle interne de production conformément à la directive ATEX et les vérifications et épreuves ont fait l'objet d'un rapport.

AVERTISSEMENT: CET ASPIRATEUR N'EST PAS CONÇU POUR ÊTRE UTILISÉ DANS LES ZONES A RISQUES CLASSEES ATEX ZONE 20, OU ZONE 21. NE PAS UTILISER CET ASPIRATEUR DANS LES ZONES A RISQUES CLASSEES ATEX ZONE 20 OU ZONE 21.

AVERTISSEMENT: Cet aspirateur est conçu pour la récupération de poussières uniquement, ne pas récupérer de liquides avec cet aspirateur

AVERTISSEMENT: Seuls les accessoires et les outils fournis par le fabricant doivent être utilisés avec cet aspirateur. L'utilisation d'autres accessoires et outils peut remettre en cause l'utilisation sécuritaire du système.

2.1. CONDITIONS D'UTILISATION DANS LES ATMOSPHERES EXPLOSIBLES EN PRESENCE DE GAZ DE VAPEURS OU DE LIQUIDES INFLAMMABLES.

AVERTISSEMENT: CET ASPIRATEUR N'EST PAS CONÇU POUR ÊTRE UTILISÉ DANS LES ZONES A RISQUES EN PRESENCE DE GAZ, DE VAPEURS OU DE LIQUIDES INFLAMMABLES. **NE PAS UTILISER CET ASPIRATEUR DANS LES ZONES A RISQUES EN PRESENCE DE GAZ, DE VAPEURS OU DE LIQUIDES INFLAMMABLES.**

2.2. CONDITIONS D'UTILISATION DANS LES ATMOSPHERES EXPLOSIBLES EN PRESENCE DE POUSSIÈRES COMBUSTIBLES

Le modèle PLANET 22 S ATEX est un aspirateur industriel électrique antistatique avec mise à la terre conçu pour une utilisation dans les zones à risques classées **ATEX zone 22** où une atmosphère explosive sous forme de nuage de poussières combustibles n'est pas susceptible de se présenter en fonctionnement normal ou, si elle se présente néanmoins, n'est que de courte durée.

Le modèle PLANET 22 S ATEX **eut être utilisé pour récupérer :**

- Des particules combustibles en suspension
- Des poussières de carbone combustibles (du noir de carbone, du charbon de bois, du charbon ou de la poussière de coke)
- De la farine, des poussières de céréales, de la poussière de bois, de la poussière issue de plastiques et de produits chimiques
- **Un maximum de 2 kilos (5 lbs)** de poussières conductrices ou de poussières métalliques

AVERTISSEMENT: Pour la récupération de plus de 2 kilos (5 lbs) de poussières conductrices ou de poussières métalliques nous recommandons l'utilisation d'un « wet mix » séparateur par immersion pour précipiter les poussières dans un bain liquide.

AVERTISSEMENT: NE PAS RECUPERER DE TISON NI DE POUSSIÈRES INCANDESCENTES AVEC CET ASPIRATEUR.

3.0 MESURES DE SECURITE IMPORTANTES

3.1. ENTREE DE L'AIR DE REFROIDISSEMENT DU MOTEUR

AVERTISSEMENT: NE PAS ENROULER LE FIL ELECTRIQUE AUTOUR DE L'ENTRÉE DE L'AIR DE REFROIDISSEMENT DU MOTEUR OU OBSTRUER L'ENTRÉE DE L'AIR DE REFROIDISSEMENT DU MOTEUR D'UNE QUELCONQUE MANIERE QUE CE SOIT. CECI EMPECHERAIT L'AIR DE REFROIDIR LE MOTEUR, CELUI-CI CHAUFFERAIT ET L'ASPIRATEUR S'ARRETERAIT.



L'entrée de l'air de refroidissement du moteur doit rester inobstruée en tout temps



3.2. LUMIERE D'AVERTISSEMENT DU COLMATAGE DES FILTRES:

Une lumière permettant d'avertir que les filtres sont colmatés est installée sur l'aspirateur. La lumière s'allume indiquant une baisse de la puissance d'aspiration. Dans ce cas le sac de récupération des poussières peut être plein, les filtres en tissus (filtre principal et filtre de sureté) peuvent être saturés et avoir besoin d'être lavés ou les filtres HEPA peuvent être saturés et avoir besoin d'être remplacés.

AVERTISSEMENT: Lorsque la lumière d'avertissement du colmatage des filtres s'allume, éteindre l'aspirateur aussitôt que possible car le colmatage des filtres peut entraîner une augmentation de la température à l'intérieur de l'aspirateur et peut occasionner des dommages au moteur.

Pour la maintenance se référer aux sections « Nettoyage et maintenance » et « Assemblage et remplacement des filtres HEPA ».

3.3. COUCHES DE POUSSIÈRES

AVERTISSEMENT : Nettoyer régulièrement les surfaces de l'aspirateur avec un linge humide pour éviter l'accumulation de poussière sur l'aspirateur qui pourrait créer à une source potentielle d'inflammation.

3.4. LIMITATION DE LA TEMPERATURE

En présence de nuages de poussière

AVERTISSEMENT : La température maximum de surface de l'aspirateur est de 200°C. Cet équipement **ne doit pas être utilisé en présence d'un nuage de poussière dont la température minimum d'ignition est inférieure à 300°C.**

En présence de couches de poussières

AVERTISSEMENT : La température maximum de surface de l'aspirateur est de 200°C. Cet équipement **ne doit pas être utilisé en présence de couches de poussières dont la température minimum d'ignition est inférieure à 275°C.**

3.5. MATIERE INCANDESCENTE

AVERTISSEMENT : NE RAMASSER AUCUNE MATIERE INCANDESCENTE OU D'OU S'ECHAPPE DE LA FUMEE TELLE QU'UNE CIGARETTE, UNE ALLUMETTE, DES CENDRES CHAUDES OU UN TISON INCANDESCENT.

3.6. LIQUIDES INFLAMMABLES

AVERTISSEMENT : CET ASPIRATEUR N'EST PAS CONÇU POUR RECUPERER DES LIQUIDES INFLAMMABLES. NE PAS UTILISER CET ASPIRATEUR POUR RECUPERER DES LIQUIDES INFLAMMABLES.

3.7. POUSSIÈRES CONDUCTRICES ET POUSSIÈRES MÉTALLIQUES

AVERTISSEMENT: Pour la récupération de plus de 2 kilos (5 lbs) de poussières conductrices ou de poussières métalliques nous recommandons l'utilisation d'un « wet mix » séparateur par immersion pour précipiter les poussières dans un bain liquide.

3.8. AUTO-INFLAMMATION DES POUSSIÈRES

AVERTISSEMENT : NE PAS UTILISER CET ASPIRATEUR POUR RECUPERER DES POUSSIÈRES OU UN MÉLANGE DE POUSSIÈRES QUI S'AUTO-INFLAMME.

3.9. MESURES DE SECURITE IMPORTANTES AU REGARD DE LA GENERATION DE CHARGES ELECTROSTATIQUE

Lorsque l'aspirateur est utilisé tel que recommandé dans ce manuel il a été déterminé qu'aucune accumulation significative ou continue de charge électrostatique pouvant agir comme source potentielle d'inflammation peut survenir.

Néanmoins, il est recommandé pour une utilisation sûre de ne pas effectuer d'action sur les parties non conductrices de l'aspirateur tel qu'un frottement intense et continu qui pourrait mener à une accumulation significative de charge électrostatique.

Les instructions ci-dessous doivent être observées spécifiquement pour les couvercles en plastique.

4.0 DIRECTIVES AVANT LA MISE EN MARCHÉ ET MESURES DE SÉCURITÉ IMPORTANTES

AVERTISSEMENT: L'aspirateur doit être relié à la terre pendant son utilisation. NE PAS FAIRE FONCTIONNER L'ASPIRATEUR SANS QU'IL SOIT RELIÉ À UNE SOURCE FIABLE DE MISE À LA TERRE.

AVERTISSEMENT: L'aspirateur et les accessoires sont entièrement reliés à la terre et sont constitués entièrement de matériaux antistatiques. N'utiliser que les pièces de rechange fournies par le fabricant ou par un de ses distributeurs autorisés.

AVERTISSEMENT: L'aspirateur est fourni sans prise électrique. Il est de la responsabilité de l'utilisateur d'installer et d'utiliser une prise électrique certifiée conforme pour l'utilisation dans les atmosphères explosibles concernées.

AVERTISSEMENT: La prise électrique doit être installée par un électricien qualifié uniquement. Le câble électrique doit être branché sur une prise adaptée, correctement installée et reliée à la terre conformément aux réglementations locales.

AVERTISSEMENT: L'aspirateur est conçu pour la récupération des poussières uniquement et doit être utilisé et entreposé à l'abri de l'humidité.

AVERTISSEMENT: Avant utilisation, il convient que les opérateurs reçoivent de l'information, des instructions et une formation pour l'utilisation de l'appareil et les poussières pour lesquelles il doit être utilisé, y compris la méthode sûre pour récupérer et éliminer les matériaux recueillis.

AVERTISSEMENT: Pour les utilisateurs effectuant la maintenance, la machine doit être démontée, nettoyée et maintenue, autant que possible, sans causer de risque pour les personnes effectuant la maintenance et les autres personnes. Les précautions à prendre comprennent la décontamination avant le démontage, la présence d'un système de ventilation filtrant l'air ou la machine est démontée, le nettoyage de l'aire de maintenance et l'utilisation d'équipement de protection personnel adéquate.

AVERTISSEMENT: Le fabricant, ou une personne formée, doit procéder à une inspection technique au moins une fois par an, consistant, par exemple, à l'inspection des filtres pour détecter tout dommage, à la vérification de l'étanchéité de la machine et du bon fonctionnement du mécanisme de contrôle. De plus, pour les machines de classe de poussière H, l'efficacité de filtration de la machine doit être testée au minimum annuellement et plus fréquemment si cela est requis par les lois en vigueur.

AVERTISSEMENT: Cet aspirateur n'est pas conçu pour récupérer des poussières ou des liquides avec un important risque d'explosion ni des mélanges de poussières combustibles avec des liquides.

AVERTISSEMENT: Une utilisation de l'aspirateur allant à l'encontre des fins pour lesquelles il a été conçu, des normes applicables ou des recommandations du fabricant amènera l'annulation de la garantie.

- a. Avant d'utiliser l'aspirateur consulter le code électrique local en vigueur et les autorités ayant juridiction. S'assurer que les installations électriques sont compatibles avec la tension (exprimée en Volt) indiquée sur la plaque fixée sur l'aspirateur.
- b. S'assurer de la bonne condition du câble électrique de l'aspirateur avant chaque utilisation (fissure ou altération). Si celui-ci est endommagé, le faire réparer par le fabricant. N'utiliser que le câble électrique fourni avec l'aspirateur ou fourni par le fabricant.
- c. Ne pas entraîner l'aspirateur en le tirant par le câble électrique.
- d. Éteindre l'aspirateur et débrancher le câble électrique avant le nettoyage et la maintenance de l'aspirateur et avant d'entreposer l'aspirateur. **Le nettoyage et la maintenance de l'aspirateur doivent se faire uniquement dans des atmosphères non classées « à risques ».**
- e. L'aspirateur est conçu pour être utilisé en intérieur uniquement.
- f. S'assurer que la cuve de récupération est propre et sèche avant d'utiliser l'aspirateur.
- g. Ne pas utiliser l'aspirateur sans que tous filtres soient en bon état et correctement installés (voir le paragraphe concernant le système de filtration).
- h. Brancher l'aspirateur uniquement à une prise électrique correctement reliée à la terre. Voir le paragraphe «Directives pour la mise à la terre».
- i. N'utiliser qu'une rallonge ATEX conforme à l'analyse de risque menée par l'utilisateur final.
- j. Pour des poussières avec une énergie d'ignition de moins de 1mJ des restrictions supplémentaires imposées par les autorités peuvent s'appliquer

5.0 MESURES DE SECURITE A PRENDRE POUR LA RECUPERATION DE MATIERES TOXIQUES OU NUISIBLES

AVERTISSEMENT: Le modèle PLANET 22 S ATEX non équipé d'un filtre HEPA ne doit pas être utilisé pour la récupération de matières toxiques ou nuisibles.

DANGER: Si vous utilisez votre aspirateur pour la récupération de matières toxiques ou nuisibles, les mesures de sécurité suivantes s'appliquent:

- a. L'aspirateur doit être équipé d'un filtre de type HEPA.
- b. Seules les personnes qui ont reçu une formation spécifique sont habilitées à utiliser l'aspirateur
- c. Porter les habits et les équipements de protection adaptés lors de l'utilisation et de la maintenance de l'aspirateur;
- d. Le retraitement des substances récupérées devra se faire de façon responsable. Les matières toxiques récupérées devront être manipulées selon les normes et règles légales en vigueur.

AVERTISSEMENT: L'aspirateur contient des poussières toxiques. Les opérations de vidage et de maintenance de l'aspirateur, incluant le retrait du sac de récupération doivent être effectuées uniquement par du personnel autorisé et portant les habits et les équipements de protection adaptés. Ne pas utiliser l'aspirateur sans que tous filtres soient correctement installés

NOTE: Les risques pour la santé liés à l'utilisation de cet aspirateur pour la récupération d'amiante ou d'autres substances à risque pour la santé n'ont pas fait l'objet de test dans le cadre de la certification de l'aspirateur.

6.0 DIRECTIVES POUR LA MISE A LA TERRE

Cet aspirateur doit être convenablement relié à la terre. En cas de problème de fonctionnement ou de panne, la mise à la terre assure un trajet de moindre résistance du courant électrique pour éviter l'accumulation de la charge électrostatique en permettant le déchargement de l'électricité dans le sol.

L'aspirateur est équipé d'un câble électrique permettant de le relier à la terre. L'aspirateur est fourni sans prise électrique. Il est de la responsabilité de l'utilisateur d'installer et d'utiliser une prise électrique certifiée conforme pour l'utilisation dans les atmosphères explosibles concernées. La prise électrique doit être installée par un électricien qualifié uniquement.

Le câble électrique doit être branché sur une prise correctement installée et reliée à la terre conformément aux réglementations locales. S'assurer que le fusible sur le panneau électrique possède la puissance suffisante et dépasse le courant maximum indiqué sur l'étiquette fixée sur l'aspirateur. Tester la continuité électrique de l'aspirateur avant chaque utilisation (voir le paragraphe « 6. Vérification de la mise à la terre »)

AVERTISSEMENT: Cet aspirateur, conçu pour une utilisation dans les atmosphères explosibles, est équipé de roues conductibles qui lui permettent d'être relié à la terre par le sol. Ne pas remplacer les roues conductibles et utiliser uniquement les roues conductibles de rechange fournies par le fabricant.

AVERTISSEMENT: Un mauvais branchement du câble augmente les risques de choc électrique. En cas de doute faire vérifier par un électricien qualifié que le branchement assure la mise à la terre de l'aspirateur. Si la prise électrique n'est pas adaptée au câble électrique faire appel à un électricien qualifié pour la remplacer. Ne pas utiliser d'adaptateur électrique.

AVERTISSEMENT: Pour dissiper efficacement l'électricité statique et pour assurer une utilisation sans étincelle, cet aspirateur doit être relié à la terre durant son utilisation.

DANGER : Ne pas faire fonctionner l'aspirateur si l'équipement électrique ne permet pas une mise à la terre ou si celle-ci est incertaine.

7.0 VERIFICATION DE LA MISE A LA TERRE

ATTENTION : Tester la continuité électrique de l'aspirateur avant chaque utilisation. Ceci afin de s'assurer que l'électricité statique produite au cours de l'utilisation de l'aspirateur sera dissipée dans la terre.

ATTENTION : N'utiliser que les pièces de rechange d'origine, fournies par le fabricant ou par un de ses distributeurs agréés.

Un ohmmètre est requis pour réaliser le test de continuité suivant.

- a. Débrancher l'aspirateur.
- b. S'assurer que tous les crochets sur l'aspirateur sont attachés et que la cuve de récupération détachable est correctement installée sur l'aspirateur.
- c. Détacher le tuyau d'aspiration de l'aspirateur.
- d. Réaliser sur l'aspirateur le test de continuité électrique avec l'ohmmètre entre la mise à la terre de la prise du câble électrique et l'entrée d'air de l'aspirateur. Une lecture de 10^9 ohms ou moins est nécessaire pour assurer une mise à la terre et une dissipation de l'électricité statique convenables.
- e. Réaliser le test de continuité électrique sur le tuyau d'aspiration, avec l'ohmmètre, entre les deux extrémités. Une lecture de 10^9 ohms ou moins est nécessaire pour assurer une mise à la terre et une dissipation de l'électricité statique convenables.

8.0 SYSTÈME DE FILTRATION

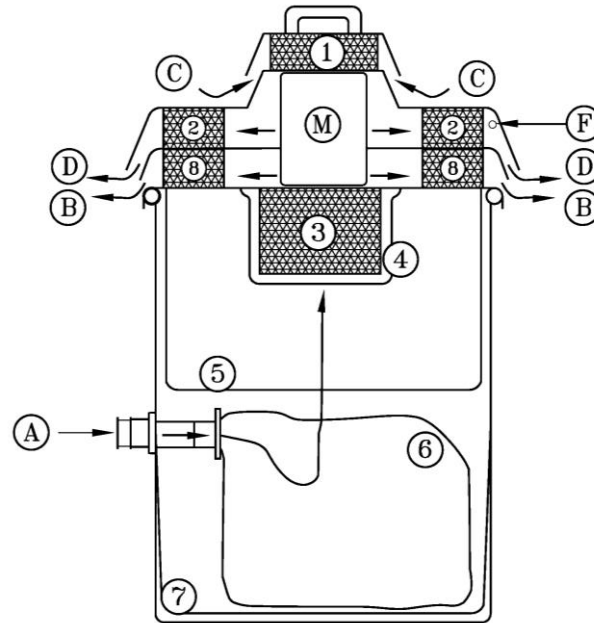


Fig. 1

- 1 **FILTRE HEPA POUR L'ENTREE D'AIR DE REFROIDISSEMENT DU MOTEUR:** efficacité > 99.995% sur des particules aussi petites que 0.3 micron.
 - 2 **FILTRE HEPA POUR LA SORTIE D'AIR DE REFROIDISSEMENT DU MOTEUR:** efficacité > 99.995% sur des particules aussi petites que 0.3 micron.
 - 3 **FILTRE HEPA POUR L'ENTREE D'AIR DE FONCTIONEMENT:** efficacité > 99.995% sur des particules aussi petites que 0.3 micron.
 4. FILTRE DE SURETÉ ANTISTATIQUE EN TISSU (LAVABLE)
 5. FILTRE PRINCIPAL ANTISTATIQUE EN TISSU (LAVABLE)
 6. SAC DE RECUPERATION ANTISTATIQUE
 7. SAC EN PLASTIQUE ANTISTATIQUE Pour faciliter la récupération des poussières récupérées
 - 8 **FILTRE HEPA POUR LA SORTIE D'AIR DE FONCTIONEMENT:** efficacité > 99.995% sur des particules aussi petites que 0.3 micron
-
- A. ENTREE D'ASPIRATION
 - B. SORTIE DE L'AIR DE FONCTIONEMENT
 - C. ENTREE DE L'AIR DE REFROIDISSEMENT DU MOTEUR
 - D. SORTIE DE L'AIR DE REFROIDISSEMENT DU MOTEUR
 - F. LUMIERE D'AVERTISSEMENT DU COLMATAGE DES FILTRES
 - M. MOTEUR

9.0 CONSIGNES D'UTILISATION POUR LA RECUPERATION DES POUSSIÈRES

AVERTISSEMENT: Cet aspirateur est conçu pour la récupération des poussières uniquement. Ne pas récupérer des liquides avec cet aspirateur.

1. Défaire les crochets et détacher la tête motrice de la cuve de récupération.
2. Installer le poly-liner au fond de la cuve de récupération (pièce No. 7 sur la figure 1)

NOTE : Pour éviter que le sac en plastique soit aspiré pendant l'utilisation de l'aspirateur, plaquer le sac en plastique le long des parois et au fond de la cuve et évacuer l'air entre le sac et la cuve.

3. Rattacher le sac de récupération des poussières à l'intérieur de la cuve à l'entrée d'aspiration de l'aspirateur. (pièce No. 6 sur la figure 1)
4. Installer le filtre principal (pièce No. 5 sur la figure 1) sur la cuve de récupération. S'assurer que le joint d'étanchéité du filtre épouse parfaitement le rebord de la cuve de récupération.

IMPORTANT: Ne pas utiliser l'aspirateur pour la récupération des poussières si les filtres en tissu (filtre de sureté et filtre principal) ne sont pas installés dans l'aspirateur.

5. Placer la tête motrice sur la cuve de récupération et attacher les crochets.
6. Attacher le tuyau à l'entrée d'aspiration située sur le côté de la cuve et fixer les outils appropriés à l'autre extrémité de tuyau.
7. Pour démarrer l'aspirateur presser l'interrupteur sur la position ON.
8. Pour éteindre l'aspirateur, presser l'interrupteur sur la position OFF. Débrancher l'aspirateur lorsque celui-ci n'est pas en fonctionnement.

10.0 NETTOYAGE ET MAINTENANCE DE L'ASPIRATEUR

LUMIERE D'AVERTISSEMENT DU COLMATAGE DES FILTRES:

Une lumière permettant d'avertir que les filtres sont colmatés est installée sur l'aspirateur. La lumière s'allume indiquant une baisse de la puissance d'aspiration. Dans ce cas le sac de récupération des poussières peut être plein, les filtres en tissu (filtre principal et filtre de sureté) peuvent être saturés et avoir besoin d'être lavés ou les filtres HEPA peuvent être saturés et avoir besoin d'être remplacés.

<u>AVERTISSEMENT:</u>	Lorsque la lumière d'avertissement du colmatage des filtres s'allume, éteindre l'aspirateur aussitôt que possible car le colmatage des filtres peut entraîner une augmentation de la température à l'intérieur de l'aspirateur et peut occasionner des dommages au moteur.
------------------------------	--

<u>IMPORTANT :</u>	Nous recommandons de procéder aux opérations de maintenance ci-dessous après chaque utilisation et <u>après un maximum de 8 heures consécutives d'utilisation.</u>
---------------------------	--

AVERTISSEMENT: Éteindre l'aspirateur et débrancher le câble électrique avant le nettoyage et la maintenance de l'aspirateur.

- a. Jeter le sac de récupération des poussières lorsque celui-ci est plein et le remplacer par un nouveau sac.
- b. Vider et nettoyer l'intérieur de la cuve de récupération.

AVERTISSEMENT : Vider la cuve de récupération de l'aspirateur lorsque nécessaire mais également après chaque utilisation (après chaque quart de travail de 8 heures maximum). Ne pas laisser la poussière s'accumuler trop longtemps dans la cuve de récupération de l'aspirateur. Une accumulation trop importante de poussières dans la cuve de récupération peut être la source d'une explosion.

- c. Laver les filtres en tissu (filtre principal et filtre de sureté) régulièrement à l'eau tiède. Aucun savon requis. Un filtre en tissu bouché restreint la circulation de l'air et réduit la performance de l'aspirateur.

IMPORTANT: Après les avoir lavés S'assurer que les filtres en tissu sont complètement secs avant de les replacer dans l'aspirateur.

- d. Remplacer les filtres en tissu tous les deux ou trois ans en fonction de la fréquence d'utilisation de l'aspirateur.
- e. S'assurer régulièrement du bon état des filtres en tissu. Si les filtres en tissu sont endommagés, les remplacer immédiatement. Un filtre endommagé permet à la poussière et aux autres éléments de rentrer dans le moteur et peuvent causer des dommages au moteur.
- f. Nettoyer le tuyau d'aspiration pour en dégager toute poussière accumulée ou élément pouvant boucher le tuyau d'aspiration.
- g. Remplacer les filtres HEPA annuellement ou tous les deux ans en fonction de la fréquence d'utilisation de l'aspirateur.

MISE EN GARDE: **Ne pas réutiliser le filtre HEPA après l'avoir retiré de l'appareil.**

MISE EN GARDE: **Maintenir le câble électrique propre et s'assurer régulièrement qu'il ne présente pas de coupures ou de fissures.**

AVERTISSEMENT: **Lors des opérations de maintenance ou de réparation, tous les éléments contaminés qui ne peuvent pas être nettoyés de façon satisfaisante doivent être éliminés. Ces éléments doivent être éliminés dans des sacs étanches conformément aux réglementations applicables pour l'élimination de tels déchets**

AVERTISSEMENT : **Nettoyer régulièrement les surfaces de l'aspirateur avec un linge humide pour éviter l'accumulation de poussière sur l'aspirateur qui pourrait créer à une source potentielle d'inflammation.**

11.0 ASSEMBLAGE ET REMPLACEMENT DES FILTRES HEPA

Un filtre HEPA est conçu pour la filtration de particules de poussières ultrafines. Un filtre HEPA bouché réduit le débit d'air et réduit donc les performances de l'aspirateur nécessitant alors son remplacement.

La durée de vie des filtres HEPA dépend grandement de l'utilisation de l'aspirateur. Il est recommandé de remplacer les filtres HEPA une fois par an lorsque l'aspirateur est utilisé intensivement (quotidiennement). Les filtres peuvent être remplacés tous les deux ans si l'aspirateur est utilisé moins fréquemment (deux ou trois fois par semaine).

ATTENTION : **Si l'aspirateur est utilisé pour la récupération de matières toxiques ou nuisibles, porter les habits et les équipements respiratoires adaptés pour remplacer le filtre HEPA ou lors de la maintenance de toute autre pièce contaminée de l'aspirateur.**

11.1. REMPLACEMENT DU FILTRE HEPA POUR L'ENTREE D'AIR DE REFROIDISSEMENT DU MOTEUR (ELEMENT NO. 1, VOIR L'ILLUSTRATION A LA SECTION NO. 8)

1. Eteindre l'aspirateur et débrancher le câble de la prise électrique.
2. Dévisser les trois écrous rattachant la section supérieure de la tête motrice au couvercle
3. Enlever le filtre HEPA contaminé
4. Vérifier avec attention le bon état des joints, s'assurer qu'ils ne sont ni usés ni fissurés. Remplacer les joints si ceux-ci sont défectueux.
5. Placer un nouveau filtre sur le couvercle
6. Rattacher de façon sécuritaire la section supérieure de la tête motrice au couvercle en utilisant les trois écrous.
7. Jeter le filtre HEPA contaminé en respectant les normes et les règles légales en vigueur.

11.2. REMPLACEMENT DU FILTRE HEPA POUR LA SORTIE D'AIR DE REFROIDISSEMENT DU MOTEUR (ELEMENT NO. 2, VOIR L'ILLUSTRATION A LA SECTION NO. 8)

1. Eteindre l'aspirateur et débrancher le câble de la prise électrique.
2. Dévisser les six écrous rattachant la section médiane de la tête motrice au couvercle
3. Enlever le filtre HEPA contaminé
4. Vérifier avec attention le bon état du joint sur le filtre HEPA. Remplacer le joint s'il est défectueux.
5. Placer un nouveau filtre sur le couvercle
6. Rattacher de façon sécuritaire la section médiane de la tête motrice au couvercle en utilisant les six écrous.
7. Jeter le filtre HEPA contaminé en respectant les normes et les règles légales en vigueur.

11.3. REMPLACEMENT DU FILTRE HEPA POUR LA SORTIE D'AIR DE FONCTIONNEMENT (ELEMENT NO. 8, VOIR L'ILLUSTRATION A LA SECTION NO. 7)

1. Eteindre l'aspirateur et débrancher le câble de la prise électrique.
2. Dévisser les six écrous rattachant la section inférieure de la tête motrice au couvercle
3. Enlever le filtre HEPA contaminé
4. Vérifier avec attention le bon état du joint sur le filtre HEPA. Remplacer le joint s'il est défectueux. (Pièce # 215372G)
5. Placer un nouveau filtre sur le couvercle (Pièce # 215372)
6. Rattacher de façon sécuritaire la section inférieure de la tête motrice au couvercle en utilisant les six écrous.
7. Jeter le filtre HEPA contaminé en respectant les normes et les règles légales en vigueur.

11.4. REMPLACEMENT DU FILTRE HEPA POUR L'ENTREE D'AIR DE FONCTIONNEMENT (ELEMENT NO. 3, VOIR L'ILLUSTRATION A LA SECTION NO. 8)

1. Eteindre l'aspirateur et débrancher le câble de la prise électrique.
2. Défaire les crochets et détacher la tête motrice de la cuve de récupération
3. Enlever le filtre de sureté
4. Dévisser l'écrou rattachant le filtre HEPA au-dessous de la tête motrice
5. Enlever le filtre HEPA contaminé
6. Vérifier avec attention le bon état des joints, s'assurer qu'ils ne sont ni usés ni fissurés. Remplacer les joints si ceux-ci sont défectueux.
7. Placer un nouveau filtre HEPA
8. Fixer de façon sécuritaire le filtre HEPA à l'aide de l'écrou
9. Replacer le filtre de sureté autour du filtre HEPA
10. Jeter le filtre HEPA contaminé en respectant les normes et les règles légales en vigueur

12.0 ENTREPOSAGE

Il est recommandé que l'intérieur de la cuve de récupération soit propre et sec avant d'entreposer l'aspirateur.

13.0 SPECIFICATIONS TECHNIQUES

Tension électrique	220-240 V
Fréquence électrique	50/60 Hz
Phase	Monophasé
P_m^*	1080 W
Puissance électrique	1.2 kW
Intensité	5 A
Flux d'air	194 m ³ /h
Dépression	245 hPa / 2504 mm H ₂ O
Niveau sonore	72 dB(A)
Prise électrique	Non incluse
Diamètre de l'entrée d'air	60 mm
Chariot	4 roues (4W)
Volume du sac de récupération	19 liters
Longueur	43 cm
Largeur	43 cm
Poids (Aspirateur seul)	24 kg.
Hauteur	102 cm
Longueur du câble électrique	10 m

* **Condition normale d'opération:** conditions selon lesquelles la machine est en fonction lors d'une utilisation normale, obtenues à une puissance P_m du moteur de l'aspirateur.

14.0 DIAGNOSTIC DE PANNE

Problème	Causes probables	Solutions
Baisse de la force d'aspiration	Les filtres en tissu sont sales.	Laver ou remplacer les filtres.
	La cuve de récupération est pleine.	Vider la cuve de récupération
	Le tuyau d'aspiration ou les accessoires de l'aspirateur sont bloqués	Débloquer en utilisant une balayette ou un outil approprié
	Les filtres HEPA sont saturés	Changer les filtres HEPA

15.0 DECLARATION DE CONFORMITE UE



Integrated
Professional
Cleaning

DECLARATION DE CONFORMITE UE

IPCleaning S.r.l.

Via E. Fermi 2, 26022 Castelverde (Cremona) , Italia



Déclare sous sa propre responsabilité que l'équipement suivant :

**Aspirateur industriel électrique pour la récupération des poussières uniquement
Modèle antistatique avec mise à la terre:**

Modèle :

PLANET 22 S ATEX

Portant le marquage suivant:

  II 3 D Ex h tc IIIC T200°C Dc IP6X

Est conçu et fabriqué conformément aux directives suivantes:

1. ATEX directive 2014/34/UE

La conformité à la directive a été obtenue suite à l'application des normes suivantes :

- EN IEC 60079-0:2018
- EN 60079-31:2014
- EN ISO 80079-36: 2016
- EN ISO 80079-37: 2016
- EN 1127-1:2019

L'application des normes a fait l'objet d'un contrôle interne de fabrication

L'équipement est également conforme aux exigences du point de vue de la sécurité électrique, qui sont décrites dans la **directive machine 2006/42/CE**. La conformité à la directive a été obtenue suite à l'application des normes suivantes :

- EN 60204-1: 2018
- EN 60335-1: 2012 et ses amendement A11 : 2014 et A13 : 2017
- EN 60335-2-69: 2012

1. La directive de compatibilité électromagnétique (CEM) 2014/30/UE.

La conformité à la directive a été obtenue suite à l'application des normes suivantes :

- EN 61000-6-1:2007
- EN 61000-6-3:2007 et son amendement A1: 2011

Sous réserve que l'équipement est utilisé aux fins pour lesquelles il a été conçu, selon les normes applicables et selon les recommandations du fabricant; nous nous signons que l'équipement, auquel se réfère cette déclaration, est conforme aux directives et normes ci-dessus.

Castelverde, le 30 juillet 2021

Représentant légal
dott. Pietro Annibaldi Corsano

16.0 ANNEXES

Faire référence aux documents suivants pour obtenir l'information nécessaire pour l'installation, la maintenance et la conformité des pièces certifiées EX assemblées dans cet équipement :

- Cable gland model GHG 960 - EC Type Examination Certificate No. PTB 14 ATEX 1015X (6 pages)
- Cable gland model GHG 960 – Operating instructions (12 pages)



(1) **EU-TYPE-EXAMINATION CERTIFICATE**
(Translation)

(2) Equipment or Protective Systems Intended for Use in
Potentially Explosive Atmospheres - **Directive 2014/34/EU**

(3) EU-Type Examination Certificate Number:

PTB 14 ATEX 1015 X

Issue: 01

(4) Product: Cable gland type GHG 960 **** * ****

(5) Manufacturer: COOPER Crouse-Hinds GmbH

(6) Address: Neuer Weg Nord 49, 69412 Eberbach, Germany

(7) This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 17 of the Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in the confidential Test Report PTB Ex 16-15133.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0:2012 + A11:2013, EN 60079-7:2015, EN 60079-31:2014

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.


(11) This EU-Type Examination Certificate relates only to the design and construction of the specified product in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

(12) The marking of the product shall include the following:

 **II 2 G Ex eb IIC Gb**
 **II 2 D Ex tb IIIC Db**

Konformitätsbewertungsstelle, Sektor Explosionsschutz
On behalf of PTB:

Braunschweig, January 16, 2017


Dr.-Ing. D. Markus
Oberregierungsrat



sheet 1/6

EU-Type Examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt. In case of dispute, the German text shall prevail.

(13)

SCHEDULE

(14) EU-Type Examination Certificate Number PTB 14 ATEX 1015 X, Issue: 01

(15) Description of Product

The cable gland, type GHG 960 **** * ****, made of polyamide serves to introduce permanently laid cables into electrical equipment of the type of protection Increased Safety "eb" and Protection by enclosure "tb". The cable entry is composed of intermediate glands with two different widths of threaded joint, sealing rings of different designs and a cap nut. Accessories are: blanking plug, reducing gland, multiple cable gland, flat cable gland and expansion gland. The cap nut is optionally made in black resp. blue for the distinction of Ex-e and Ex-i circuits.

They are installed in enclosures with through-holes or threaded holes, with or without lock nut.

Technical data

Type	Ø Clamping range in mm	Service temperature	One pcs.	Packing set
Cable Gland M12	Ø 5 – 7	-20°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Cable Gland M16	Ø 5.5 – 7 Ø 7 – 10	-20°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Cable Gland M20	Ø 5.5 – 7 Ø 7 – 9 Ø 9.5 – 13	-20°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Cable Gland M20	Ø 5.5 – 7 Ø 7 – 9 Ø 9.5 – 11	-40°C - +70°C	GHG 960 9248 P****	GHG 960 1955 R****
Cable Gland M25	Ø 8 – 10 Ø 10 – 13 Ø 13.5 – 17.5	-25°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Cable Gland M25	Ø 8 – 10 Ø 10 – 13 Ø 13.5 – 15	-55°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Cable Gland M32	Ø 14 – 17 Ø 17.5 – 21	-55°C - +70°C	GHG 960 9248 P****	GHG 960 1955 R****
Cable Gland M32	Ø 14 – 17 Ø 17.5 – 21	-20°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Cable Gland M40	Ø 19 – 22 Ø 22 – 28	-55°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Cable Gland M50	Ø 24 – 28 Ø 28 – 35	-55°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Cable Gland M63	Ø 29 – 35 Ø 36 – 41 *	-55°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Extension gland M16/M20X1.5	Ø 5.5 – 7 Ø 7 – 9 Ø 9.5 – 13	-20°C - +70°C	GHG 960 9244 P****	GHG 960 1956 R****
Extension gland M20/M25X1.5	Ø 8 – 10 Ø 10 – 13 Ø 13.5 – 15	-20°C - +70°C	GHG 960 9244 P****	GHG 960 1956 R****
Extension gland M25/M32X1.5	Ø 14 – 17 Ø 17.5 – 21	-55°C - +70°C	GHG 960 9244 P****	GHG 960 1956 R****
Extension gland M32/M40X1.5	Ø 19 – 22 Ø 22 – 28	-55°C - +70°C	GHG 960 9244 P****	GHG 960 1956 R****
Extension gland M40/M50X1.5	Ø 24 – 28 Ø 28 – 35	-55°C - +70°C	GHG 960 9244 P****	GHG 960 1956 R****
Extension gland M50/M63X1.5	Ø 29 – 35 Ø 36 – 41 *	-55°C - +70°C	GHG 960 9244 P****	GHG 960 1956 R****
Reducing gland M16-M12		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M20-M12		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M20-M16		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M25-M12		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M25-M16		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M25-M20		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M32-M12		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M32-M16		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M32-M20		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****

sheet 2/6

EU-Type Examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt. In case of dispute, the German text shall prevail.

SCHEDULE TO EU-TYPE EXAMINATION CERTIFICATE PTB 14 ATEX 1015 X, Issue: 01

Reducing gland M32-M25		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M40-M16		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M40-M20		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M40-M25		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M40-M32		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M50-M20		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M50-M25		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M50-M32		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M50-M40		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M63-M25		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M63-M32		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M63-M40		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M63-M50		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Multiple gland M25X1.5 2- fold	Ø 4.5 – 7 -----	-20°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Multiple gland M32X1.5 4- fold	Ø 4.5 – 7 -----	-20°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Flat cable gland M25X1,5	G18 = 12,5 - 9 x 8 - 5 G24 = 14 - 11 x 8 - 6	-55°C - +70°C (+110°C)***	GHG 960 9242 P****	
Cable gland PG 16	**	-20°C - +70°C	GHG 960 9243 P****	
Cable gland PG 16	**	-55°C - +70°C	GHG 960 9243 P****	
Blanking plug for M12	Ø 5	-55°C - +70°C	GHG 960 6107 P****	GHG 960 1944 R****
Blanking plug for M16	Ø 6	-55°C - +70°C	GHG 960 6107 P****	GHG 960 1944 R****
Blanking plug for M20	Ø 7	-55°C - +70°C	GHG 960 6107 P****	GHG 960 1944 R****
Blanking plug for M25	Ø 10	-55°C - +70°C	GHG 960 6107 P****	GHG 960 1944 R****
Blanking plug for M32	Ø 13	-55°C - +70°C	GHG 960 6107 P****	GHG 960 1944 R****
Blanking plug for M40	Ø 19	-55°C - +70°C	GHG 960 6107 P****	GHG 960 1944 R****
Blanking plug for M50	Ø 25	-55°C - +70°C	GHG 960 6107 P****	GHG 960 1944 R****
Blanking plug for M63	Ø 32	-55°C - +70°C	GHG 960 6107 P****	GHG 960 1944 R****
Blanking plug for multiple gland	Ø 5	-55°C - +70°C	GHG 960 6107 P****	GHG 960 1944 R****
* additional sealing ring for the clamping range Ø 41mm up to Ø 48mm				
** the same design as well as the M25 version				
*** Sealing ring for the heat cable of the flat cable gland				

Cable gland M20x1.5 options with slotted seal for the following cables:

Glass fibre cable	Application
Cable Ø. 6.4mm / Breakout inner cable / type: orange	-5°C - +45°C
Cable Ø 7.0mm / Ultra-Fox Plus / type: 903 AG 621 02 709	-20°C - +70°C
Cable Ø 6.8mm / Ehret / ICS 24 / type : 84 305 .. .	-20°C - +60°C
Cable Ø 2mm / Lichtwellenleiter LWL	-20°C - +60°C

Two different length of thread for the cable glands	short = P/R**** long = P/R****
Two different colours for the cable glands	black for Ex-e version = P/R**** blue for Ex-i version = P/R****
Installation in equipment with wall thicknesses of	minimum 1.5 mm
Ingress protection	IP 66

SCHEDULE TO EU-TYPE EXAMINATION CERTIFICATE PTB 14 ATEX 1015 X, Issue: 01

Torque cable gland

Type	Service temperature range	Impact energy	Clamping range	Torque Pressure screw	Torque Gland body
KLE	°C	Joule	Ø mm	Nm	Nm
M16	-20 - +70	low, 4	5.5 – 7.0 7.0 – 10.0	1.0 / 1.0 1.0 / 1.4	3.3
M20	-20 - +70	high, 7	5.5 – 7.0 7.0 – 9.0 9.5 – 13.0	1.5 / 1.0 1.5 / 1.4 1.0 / 1.7	2.7
M20	-40 - +70	low, 4	5.5 – 7.0 7.0 – 9.0 9.5 – 13.0	1.5 / 1.0 1.5 / 1.4 1.0 / 1.7	2.7
M20 split gasket	-20 - +70	high, 7	2,0 7.0 – 9.0	3,5 1.5 / 1.4	2.7
M25	-20 - +70	high, 7	10.0 – 13.0 13.5 – 17.5	2.3 / 2.6 1.3 / 2.3	3.0
M25	-25 - +70	high, 7	8.0 – 10.0 10.0 – 13.0 13.5 – 17.5	1.5 / 2.0 2.3 / 2.6 1.3 / 2.3	3.0
M25	-55 - +70	high, 7	8.0 – 10.0 10.0 – 13.0 13.5 - 15	1.5 / 2.0 2.3 / 2.6 1.5 / 2.3	3.0
M25 flat cable	-55 - +70 (+110°C)	high, 7	5-8x11-12.5 6-8x11-14	5.0 3.5	5.0
PG16	-25 - +70	high, 7	10.0 – 13.0 13.5 – 15.0	2.3 / 2.6 1.5 / 2.3	5.0
PG16	-55 - +70	high, 7	10.0 – 13.0 13.5 - 17.5	2.3 / 2.6 1.3 / 2.3	5.0
M32	-20 - +70	high, 7	14.0 – 17.0 17.5 – 21.0	3.0 / 4.0 1.5 / 1.3	5.0
M32	-55 - +70	high, 7	14.0 – 17.0 17.5 – 21.0	3.0 / 4.0 1.5 / 1.3	5.0
M40	-55 - +70	high, 7	19.0 – 22.0 22.0 – 28.0	3.3 / 5.5 3.3 / 6.7	7.5
M50	-55 - +70	high, 7	24.0 – 28.0 28.0 – 35.0	6.0 / 7.0 5.0 / 7.0	7.5
M63	-55 - +70	high, 7	29.0 – 35.0 36.0 - 41.0	12.0 / 12.0 12.0 / 13.0	7.5

Torque multiple cable gland

Type	Service temperature range	Impact energy	Clamping range	Torque Pressure screw	Torque Gland body
KLE	°C	Joule	Ø mm	Nm	Nm
M25 2-fach	-20 - +70	high, 7	2x 4.5 – 7.0	2.0 / 2.0	3.0
M32 4-fach	-20 - +70	high, 7		3.0 / 3.5	5.0

SCHEDULE TO EU-TYPE EXAMINATION CERTIFICATE PTB 14 ATEX 1015 X, Issue: 01

Torque extension cable gland

Type	Service temperature range	Impact energy	Clamping range	Torque Pressure screw	Torque Gland body
KLE	°C	Joule	Ø mm	Nm	Nm
M16/M20	-20 - +70	high, 7	5.5 – 7.0 7.0 – 9.0 9.5 – 13.0	1.0 / 1.0 1.5 / 1.4 1.0 / 1.7	2.7
M16/M20	-40 - +70	low, 4	5.5 – 7.0 7.0 – 9.0 9.5 – 13.0	1.5 / 1.0 1.5 / 1.4 1.0 / 1.7	2.7
M20/M25	-20 - +70	high, 7	8.0 – 10.0 10.0 – 13.0 13.5 – 17.5	1.5 / 1.0 2.3 / 2.6 1.3 / 2.3	3.0
M20/M25	-55 - +70	high, 7	8.0 – 10.0 10.0 – 13.0 13.5 – 15.0	1.5 / 2.0 2.3 / 2.6 1.5 / 2.3	3.0
M25/M32	-55 - +70	high, 7	14.0 – 17.0 17.5 – 21.0	3.0 / 4.0 1.5 / 1.3	5.0
M32/M40	-55 - +70	high, 7	19.0 – 22.0 22.0 – 28.0	3.3 / 5.5 3.3 / 6.7	7.5
M40/M50	-55 - +70	high, 7	24.0 – 28.0 28.0 – 35.0	6.0 / 7.0 5.0 / 7.0	7.5
M50/M63	-55 - +70	high, 7	29.0 – 35.0 36.0 – 41.0 (41.0 – 48.0)	12.0 / 12.0 12.0 / 13.0 (13.0 / 7.8)	7.5

Nomenclature

GHG 960	****	*	****
1	2	3	4

- 1) Type
- 2) Design see table 1 above
- 3) P = Single part
R = Packing set
- 4) Variants e.g. colour, thread length, blanking elements, size, etc.

Details of change:

- 1) New test according to EN 60079-31:2014 and EN 60079-7:2015.
- 2) The sizes M16 to M25 have got an additional sealing ring.
- 3) The size G26 of the flat cable gland has been changed to G24.
- 4) The minimum ambient temperature of size M25x1.5 is changed to -25 °C

(16) Test Report PTB Ex16-15133

SCHEDULE TO EU-TYPE EXAMINATION CERTIFICATE PTB 14 ATEX 1015 X, Issue: 01

(17) Specific conditions of use

Only permanently installed cables may be entered through the glands. The operating company must ensure that adequate strain relief is provided.

The degree of protection (IP66) will only be met if seals and cable glands are properly fitted. The manufacturer's instructions must be followed.

The types with low impact energy have to be mounted in the enclosure, so they are mechanically protected against impact energy.

The blanking plug type GHG 960 6107 P**** resp. GHG 960 1944 R**** shall only be used with the cable glands type GHG 960 92** P**** resp. GHG 960 19** R****.

(18) Essential health and safety requirements

Met by compliance with the aforementioned standards.

According to Article 41 of Directive 2014/34/EU, EC-type examination certificates which have been issued according to Directive 94/9/EC prior to the date of coming into force of Directive 2014/34/EU (April 20, 2016) may be considered as if they were issued already in compliance with Directive 2014/34/EU. By permission of the European Commission supplements to such EC-type examination certificates and new issues of such certificates may continue to hold the original certificate number issued before April 20, 2016.

Konformitätsbewertungsstelle, Sektor Explosionsschutz
On behalf of PTB:

Braunschweig, January 16, 2017

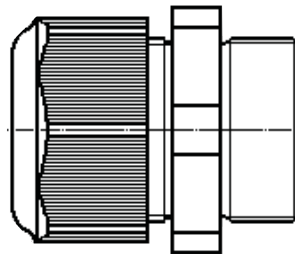

Dr.-Ing. D. Markus
Oberregierungsrat



Explosiongeschützte Kabel- und Leitungseinführungen,
Verschlussstopfen, Schraubverschlüsse, Trompetenverschraubungen,
Reduzierungen und Entwässerungsstopfen

Explosion-protected cable entries, blanking plugs, screw plugs,
trumpet-shaped cable glands, reducing glands and drain plugs

Entrées de câble, bouchons filetés, bouchons de fermeture,
presses-étoupes à trompette, bagues de réduction et bouchons de
purge pour atmosphères explosives



CZ: "Tento návod k použití si můžete vyžádat ve svém mateřském jazyce u příslušného zastoupení společnosti Cooper Crouse-Hinds/CEAG ve vaší zemi."

DK: "Montagevejledningen kan oversættes til andre EU-sprog og rekvireres hos Deres Cooper Crouse-Hinds/CEAG leverandør"

E: "En caso necesario podrá solicitar de su representante Cooper Crouse-Hinds/CEAG estas instrucciones de servicio en otro idioma de la Union Europea"

EST: "Seda kasutusjuhendit oma riigikeeles võite küsida oma riigis asuvasest asjaomasest Cooper Crouse-Hinds/CEAG esindusest."

FIN: "Tarvittaessa tämän käyttöohjeen käännös on saatavissa toisella EU:n kielellä Teidän Cooper Crouse-Hinds/CEAG - edustajaltanne"

GR: *Εάν χρειασθεί, μεταφραση των οδηγιών χρήσεως σε άλλη γλώσσα της ΕΕ, μπορεί να ζητηθεί από τον Αντιπροσωπο της Cooper Crouse-Hinds/CEAG*

H: "A kezelési útmutatót az adott ország nyelvén a Cooper Crouse-Hinds/CEAG cég helyi képviselőtől igényelheti meg."

I: "Se desiderate la traduzione del manuale operativo in un'altra lingua della Comunità a Europea potete richiederla al vostro rappresentante Cooper Crouse-Hinds/CEAG"

LT: "Šios naudojimo instrukcijos, išverstos į Jūsų gimtąją kalbą, galite pareikalauti atsakingoje "Cooper Crouse-Hinds/CEAG" atstovybėje savo šalyje."

LV: "Šo ekspluatācijas instrukciju valsts valodā varat pieprasīt jūsu valsts atbildīgajā Cooper Crouse-Hinds/CEAG pārstāvniecībā."

M: "Jistghu jitolbu dan il-manwal fil-lingwa nazzjonali taghhom minghand ir-rappreżentant ta' Cooper Crouse Hinds/CEAG f'pajjiżhom."

NL: "Indien noodzakelijk kan de vertaling van deze gebruiksinstructie in een andere EU-taal worden opgevraagd bij Uw Cooper Crouse-Hinds/CEAG - vertegenwoordiging"

P: "Se for necessária a tradução destas instruções de operação para outro idioma da União Europeia, pode solicita-la junto do seu representante Cooper Crouse-Hinds/CEAG"

PL: "Niniejszą instrukcję obsługi w odpowiedniej wersji językowej można zamówić w przedstawicielstwie firmy Cooper-Crouse-Hinds/CEAG na dany kraj."

S: "En översättning av denna montage- och skötselinstruktion till annat EU - språk kan vid behov beställas från Er Cooper Crouse-Hinds/CEAG- representant"

SK: "Tento návod na obsluhu Vám vo Vašom rodnom jazyku poskytne zastúpenie spoločnosti Cooper Crouse-Hinds/CEAG vo Vašej krajine."

SLO: "Navodila za uporabo v Vašem jeziku lahko zahtevate pri pristojnem zastopništvu podjetja Cooper Crouse-Hinds/CEAG v Vaši državi."

RUS: "При необходимости, вы можете запрашивать перевод данного руководства на другом языке ЕС или на русском от вашего Cooper Crouse-Хиндс / CEAG - представителяй."

GHG 960 7001 P0001 D/GB/F (s)

EAT•N

Powering Business Worldwide



Kabel- und Leitungseinführungen,
Verschlussstopfen,
Schraubverschlüsse, Trompeten-
verschraubungen, Reduzierungen
und Entwässerungsstopfen

Cable entries, blanking plugs,
screw plugs, trumpet-shaped cab-
le glands, reducing glands
and drain plugs

Entrées de câble, bouchons filetés,
bouchons de fermeture, presses-
étoupes à trompette, bagues de
réduction et bouchons de purge

Inhaltsverzeichnis:

1	Technische Daten	3
2	Legende.....	9
2.1	Sicherheitshinweise	9
3	Normenkonformität	9
4	Verwendungsbereich.....	9
5	Verwendung / Eigenschaften	9
6	Installation.....	10
6.1	Montage.....	10
6.2	Inbetriebnahme	12
7	Instandhaltung / Wartung.....	12
8	Reparatur / Instandsetzung / Änderung.....	12
9	Entsorgung / Wiederverwertung	12

Konformitätserklärung
separat beigelegt.

Contents:

1	Technical data	13
2	Legend	19
2.1	Safety instructions.....	19
3	Conformity with standards	19
4	Field of application.....	19
5	Application / Properties	19
6	Installation.....	20
6.1	Mounting	20
6.2	Putting into operation	22
7	Maintenance / Servicing	22
8	Repairs / Modifications	22
9	Disposal / Recycling.....	22

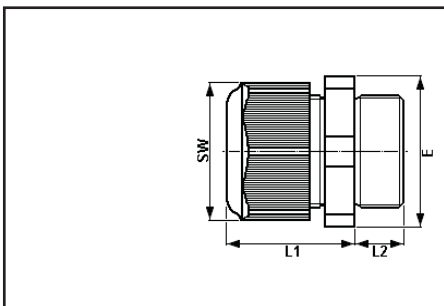
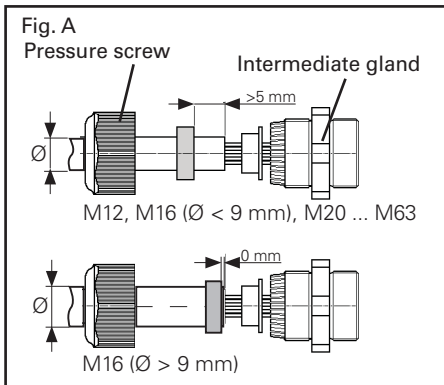
Declaration of conformity,
enclosed separately.

Contenu:

1	Caractéristiques techniques	23
2	Légende.....	29
2.1	Consignes de sécurité	29
3	Conformité aux normes	29
4	Domaine d'utilisation.....	29
5	Utilisation / Propriétés	29
6	Installation.....	30
6.1	Montage.....	30
6.2	Mise en service	32
7	Maintien/Entretien	32
8	Réparations / Remise en état.....	32
9	Évacuation des déchets / Recyclage	32

Déclaration de conformité,
jointe séparément.

Dimension drawings and dimensions in mm



1 Technical data

1.1 Technical details for: Cable entries (KLE) M12x1,5 to M63x1,5

ATEX type examination certificate: PTB 14 ATEX 1015 X^(A)

Marking acc. to 2014/34/EU and standard:

EN 60079-0

⊕ II 2 G Ex e IIC Gb

⊕ II 2 D Ex tb IIIC Db

IECEx type examination certificate:

IECEx PTB 14.0027X^(A)

Category of application: IEC60079-0

Ex e IIC Gb

Ex tb IIIC Db

^(A) The EC-Type Examination Certificate and any future supplements thereto shall, at the same time, be regarded as supplements to the EC-Type Examination Certificates PTB 99 ATEX 3128 X and PTB 99 ATEX 3101 X

Perm. storage temperature in original packing: -20° C to +70° C

Degree of protection to IEC/EN 60529: IP 66*^(*) (when fully assembled)*^(*) M40, M50 und M63 with suitable flange seal

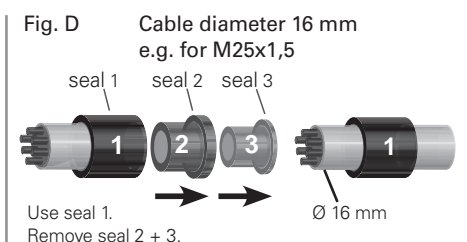
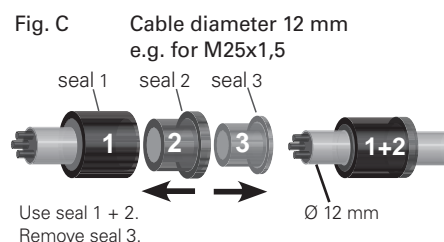
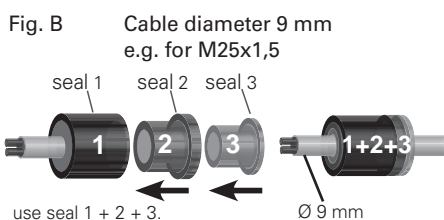
Type	SW	L1	L2	E	weight app.
M12x1,5	15 mm	19,3 mm	12 / 8 mm	16,2 mm	3,4 g
M16x1,5	20 mm	23,0 mm	12 / 8 mm	22,0 mm	6,5 g
M20x1,5	24 mm	25,0 mm	13 / 8 mm	26,5 mm	10,1 g
M25x1,5	29 mm	29,5 mm	13 / 8 mm	32,0 mm	16,9 g
M32x1,5	36 mm	35,5 mm	15 / 10 mm	40,0 mm	27,6 g
M40x1,5	46 mm	39,5 mm	15 / 10 mm	50,5 mm	50,3 g
M50x1,5	55 mm	44,0 mm	16 / 12 mm	60,0 mm	75,9 g
M63x1,5	68 mm	47,0 mm	16 / 12 mm	75,0 mm	117,6 g

Type	operating temperature	impact resistance	Cable diameter											Screw-in thread in enclosure	Colour of dust protection cover	
			Seal 1+2+3 ⁽¹⁾⁽²⁾⁽³⁾						Seal 1+2 ⁽¹⁾⁽²⁾				Seal 1 ⁽¹⁾			
			min.		max.		min.		max.		min.	max.	max.			
	°C	Joule	\varnothing	Nm**	$\varnothing^{(1)(2)}$	Nm**	\varnothing	Nm**	$\varnothing^{(1)(2)}$	Nm**	\varnothing	Nm**	$\varnothing^{(2)}$	Nm**	Nm**	
M12x1,5	-20 - 70	4									5,0	0,8	7,0	1,0	1,2	white
M16x1,5	-20 - 70	4					5,5	1,0	7,0	1,0	7,0	1,0	10,0	1,4	3,3	white
M20x1,5	-20 - 70	7	5,5	1,5	7,0	1,0	7,0	1,5	9,0	1,4	9,5	1,0	13,0	1,7	2,7	white
M20x1,5	-40 - 70	4	5,5	1,5	7,0	1,0	7,0	1,5	9,0	1,4	9,5	1,0	11,0	1,7	2,7	green
M25x1,5	-20 - 70	7	8,0	1,5	10,0	2,0	10,0	2,3	13,0	2,6	13,5	1,3	17,5	2,3	3,0	white
M25x1,5	-55 - 70	7	8,0	1,5	10,0	2,0	10,0	2,3	13,0	2,6	13,5	1,5	15,0	2,3	3,0	green
M32x1,5	-20 - 70	7					14,0	3,0	17,0	4,0	17,5	1,5	21,0	1,3	5,0	white
M32x1,5	-55 - 70	7					14,0	3,0	17,0	4,0	17,5	1,5	21,0	1,3	5,0	green
M40x1,5	-55 - 70	7					19,0	3,3	22,0	5,5	22,0	3,3	28,0	6,7	7,5	green
M50x1,5	-55 - 70	7					24,0	6,0	28,0	7,0	28,0	5,0	35,0	7,0	7,5	green
M63x1,5	-55 - 70	7					29,0	12,0	35,0	12,0	36,0	12,0	41,0	13,0	7,5	green
additional seal							41,0	13,0	48,0	7,8						

** Test torques at 20°C

⁽¹⁾ The tests of clamping ranges and torque values were performed with metal mandrel. The clamping range can vary by using cables with different manufacturing tolerances and material properties. Please use the combination of sealing 1 + 2 + 3 for the intermediate region.

⁽²⁾ When selecting the seal rubber, ensure that the cap nut can be tightened when carrying out any future maintenance work on the cable entry.



Cable entries, blanking plugs, screw plugs, trumpet-shaped cable glands, reducing glands and drain plugs

Dimension drawings and dimensions in mm

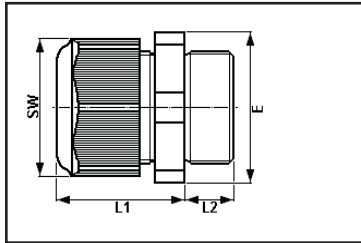
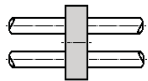


Fig. D/1 Seal insert



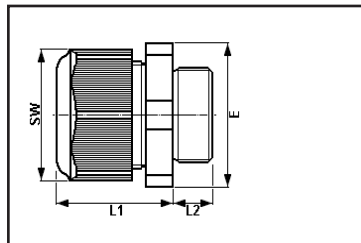
for multiple gland

1.2 Multiple glands

Type	SW	L1	L2	E	weight app.
M25x1,5 2- times	29 mm	29,5 mm	13 / 8 mm	32,0 mm	16,9 g
M32x1,5 4- times	36 mm	35,5 mm	15 / 10 mm	40,0 mm	27,6 g

Type	Operating temperature	Impact resistant	Cable diameter				
			Seal 1				
			min.		max.		
	°C	Joule	Ø	Nm	Ø	Nm	
M25x1,5 2- times	-20 - 70	< 7	2x	4,5	2,0	7,0	2,0
M32x1,5 4- times	-20 - 70	< 7	4x	4,5	3,0	7,0	3,5

1.3 Enlargement glands



Type	SW	L1	L2	E	weight app.
M16x1,5 / M20x1,5	24 mm	25,0 mm	12 mm	26,5 mm	9,2 g
M20x1,5 / M25x1,5	29 mm	29,5 mm	13 mm	32,0 mm	16,7 g
M25x1,5 / M32x1,5	36 mm	35,5 mm	15 mm	40,0 mm	27,0 g
M32x1,5 / M40x1,5	46 mm	39,5 mm	15 mm	50,5 mm	46,5 g
M40x1,5 / M50x1,5	55 mm	44,0 mm	15 mm	60,0 mm	73,5 g
M50x1,5 / M63x1,5	68 mm	47,0 mm	16 mm	75,0 mm	106,4 g

Type	Operating temperature	Impact resistant	Cable diameter												Screw-in thread in enclosure
			Seal 1+2+3 1 2 3						Seal 1+2 1 2				Seal 1 1		
			min.		max.		min.		max.		min.		max.		
°C	Joule	Ø	Nm**	Ø ⁽¹⁾⁽²⁾	Nm**	Ø	Nm**	Ø ⁽¹⁾⁽²⁾	Nm**	Ø	Nm**	Ø ⁽¹⁾	Nm**	Nm**	
M16x1,5 / M20x1,5	-20 - 70	< 7	5,5	1,5	7,0	1,0	7,0	1,5	9,0	1,4	9,5	1,0	13,0	1,7	3,3
	-40 - 70	< 4	5,5	1,5	7,0	1,0	7,0	1,5	9,0	1,4	9,5	1,0	11,0	1,7	3,3
M20x1,5 / M25x1,5	-20 - 70	< 7	8,0	1,5	10,0	2,0	10,0	2,3	13,0	2,6	13,5	1,3	17,5	2,3	2,7
	-40 - 70	< 4	8,0	1,5	10,0	2,0	10,0	2,3	13,0	2,6	13,5	1,5	15,0	2,3	2,7
M25x1,5 / M32x1,5	-55 - 70	< 7					14,0	3,0	17,0	4,0	17,5	1,5	21,0	1,3	3,0
M32x1,5 / M40x1,5	-55 - 70	< 7					19,0	3,3	22,0	5,5	22,0	3,3	28,0	6,7	5,0
M40x1,5 / M50x1,5	-55 - 70	< 7					24,0	6,0	28,0	7,0	28,0	5,0	35,0	7,0	7,5
M50x1,5 / M63x1,5	-55 - 70	< 7					29,0	12,0	35,0	12	36,0	12,0	41,0	13,0	7,5
additional seal							41,0	13,0	48,0	7,8					

** Test torques at 20°C

(1) The tests of clamping ranges and torque values were performed with metal mandrel. The clamping range can vary by using cables with different manufacturing tolerances and material properties. Please use the combination of sealing 1 + 2 + 3 for the intermediate region.

(2) When selecting the seal rubber, ensure that the cap nut can be tightened when carrying out any future maintenance work on the cable entry.

Dimension drawings and dimensions in mm

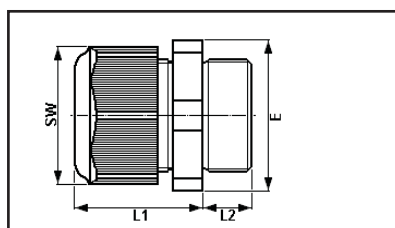
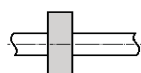


Fig. D/2 Seal insert



for gland for flat cables

1.4 Cable entries in special versions

Type	SW	L1	L2	E	weight app.
M20 with seal Ø 2 mm	24 mm	25,0 mm	13 / 8 mm	26,5 mm	10,1 g
M20 with slotted seal Ø 7,0- 13 mm	24 mm	25,0 mm	13 / 8 mm	26,5 mm	10,1 g
M25 flat cable	29 mm	29,5 mm	13 / 8 mm	32,0 mm	16,9 g
M25 with PG 16 thread	36 mm	35,5 mm	15 / 10 mm	40,0 mm	27,6 g

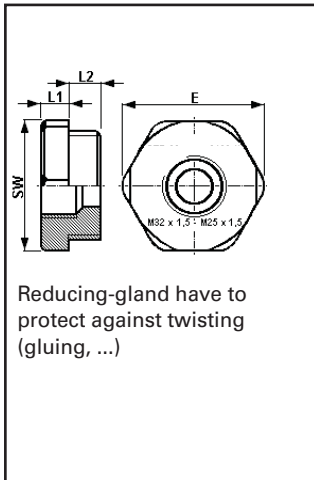
Type	Operating temperature	Impact resistant	Cable-diameter								Screw-in thread in enclosure
			Seal 1+2				Seal 2				
	°C	Joule	min. Ø	max. Nm**	min. Ø ⁽¹⁾⁽²⁾	max. Nm**	min. Ø	max. Nm**	min. Ø ⁽¹⁾⁽²⁾	max. Nm**	
M20 with seal Ø 2 mm	-20 - 60	< 7	2,0	3,5						2,7	
M20x1,5 with slotted seal Ø 7,0- 13 mm	-5 - 45		Breakout-Innenkabel Typ: orange								2,7
	-20 - 60		Ultra-Fox Plus Typ: 903 AG 621 02 709								2,7
	-20 - 60		Ehret / ICS 24 Typ: 84 305								2,7
M25x1,5 with PG 16 thread	-20 - 70	< 7	10,0	2,3	13,0	2,6	13,5	1,3	17,5	2,3	3,0
	-55 - 70	< 7	10,0	2,3	13,0	2,6	13,5	1,5	15,0	2,3	3,0
M25x1,5 flat cable	-55 - 70 (110)	< 7	G18 = 5-8x9-12,5 Flachkabel			5,0					3,0
M25x1,5 flat cable	-55 - 70 (110)	< 7	G24 / G26 = 6-8x11-14 Flachkabel			3,5					3,0
	Cable type		Seal dimensions				Cable dimensions				
M25 flat cable	Raychem XTV-4XTV 2 ...		8,0	x	11,0	mm	7,5	x	11,0	mm	3,0
M25 flat cable	Raychem VPL-5VPL 2 ...		8,0	x	11,0	mm	7,5	x	11,5	mm	3,0
M25 flat cable	Raychem BTV-3BTV 2 ...		8,0	x	11,0	mm	6,0	x	11,0	mm	3,0
M25 flat cable	Raychem QTV-10QTVR2		8,0	x	11,0	mm	5,0	x	12,5	mm	3,0
M25 flat cable Raychem	Raychem BTV-10BTV 2 ...		8,0	x	14,0	mm	6,0	x	14,0	mm	3,0
M25 flat cable	Raychem KTV-5KTV 2 ...		8,0	x	14,0	mm	7,5	x	13,5	mm	3,0

** Test torques at 20°C

(1) The tests of clamping ranges and torque values were performed with metal mandrel. The clamping range can vary by using cables with different manufacturing tolerances and material properties. Please use the combination of sealing 1 + 2 for the intermediate region.

(2) When selecting the seal rubber, ensure that the cap nut can be tightened when carrying out any future maintenance work on the cable entry.

Dimension drawings and dimensions in mm

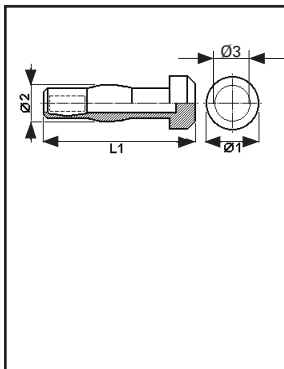


1.5 Reducing glands

Type	Operating temperature / °C	SW	L1	L2	E	Screw-in thread in enclosure / Nm	weight app.
M16x1,5 / M12x1,5	-55 - 70					3,3 Nm	
M20x1,5 / M12x1,5	-55 - 70	24 mm	6,0 mm	8 mm	26,5 mm	2,7 Nm	9,0 g
M20x1,5 / M16x1,5	-55 - 70	24 mm	6,0 mm	8 mm	26,5 mm	2,7 Nm	9,0 g
M25x1,5 / M12x1,5	-55 - 70	29 mm	6,0 mm	8 mm	32,0 mm	3,0 Nm	12,5 g
M25x1,5 / M16x1,5	-55 - 70	29 mm	6,0 mm	8 mm	32,0 mm	3,0 Nm	12,5 g
M25x1,5 / M20x1,5	-55 - 70	29 mm	6,0 mm	8 mm	32,0 mm	3,0 Nm	12,5 g
M32x1,5 / M12x1,5	-55 - 70	36 mm	6,0 mm	10 mm	40,0 mm	5,0 Nm	13,5 g
M32x1,5 / M16x1,5	-55 - 70	36 mm	6,0 mm	10 mm	40,0 mm	5,0 Nm	13,5 g
M32x1,5 / M20x1,5	-55 - 70	36 mm	6,0 mm	10 mm	40,0 mm	5,0 Nm	13,5 g
M32x1,5 / M25x1,5	-55 - 70	36 mm	6,0 mm	10 mm	40,0 mm	5,0 Nm	13,0 g
M40x1,5 / M16x1,5	-55 - 70	46 mm	6,0 mm	10 mm	50,5 mm	7,5 Nm	21,0 g
M40x1,5 / M20x1,5	-55 - 70	46 mm	6,0 mm	10 mm	50,5 mm	7,5 Nm	21,0 g
M40x1,5 / M25x1,5	-55 - 70	46 mm	6,0 mm	10 mm	50,5 mm	7,5 Nm	23,0 g
M40x1,5 / M32x1,5	-55 - 70	46 mm	6,0 mm	10 mm	50,5 mm	7,5 Nm	21,0 g
M50x1,5 / M20x1,5	-55 - 70	55 mm	6,0 mm	12 mm	60,0 mm	7,5 Nm	72,0 g
M50x1,5 / M25x1,5	-55 - 70	55 mm	6,0 mm	12 mm	60,0 mm	7,5 Nm	72,0 g
M50x1,5 / M32x1,5	-55 - 70	55 mm	6,0 mm	12 mm	60,0 mm	7,5 Nm	72,0 g
M50x1,5 / M40x1,5	-55 - 70	55 mm	6,0 mm	12 mm	60,0 mm	7,5 Nm	65,0 g
M63x1,5 / M25x1,5	-55 - 70	68 mm	6,0 mm	12 mm	75,0 mm	7,5 Nm	40,0 g
M63x1,5 / M32x1,5	-55 - 70	68 mm	6,0 mm	12 mm	75,0 mm	7,5 Nm	40,0 g
M63x1,5 / M40x1,5	-55 - 70	68 mm	6,0 mm	12 mm	75,0 mm	7,5 Nm	40,0 g
M63x1,5 / M50x1,5	-55 - 70	68 mm	6,0 mm	12 mm	75,0 mm	7,5 Nm	30,0 g

L1 = Screw-in thread in enclosure
L2 = Reducing thread

1.6 Blanking plug for multiple glands

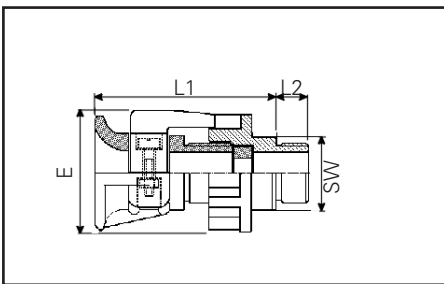


Type	Operating temperature / °C	Ø 1	Ø 2	L1	Ø 3	weight app.
M12x1,5*	-55 / +70	7,0 mm	6,0 mm	30,3 mm	5,0 mm	1,0 g
M16x1,5	-55 / +70	8,0 mm	7,0 mm	33,0 mm	6,0 mm	1,3 g
M20x1,5	-55 / +70	12,0 mm	8,5 mm	34,5 mm	7,0 mm	6,6 g
M25x1,5	-55 / +70	16,0 mm	11,0 mm	36,0 mm	10,0 mm	2,8 g
M32x1,5	-55 / +70	20,0 mm	14,0 mm	39,5 mm	13,0 mm	4,6 g
M40x1,5	-55 / +70	24,0 mm	20,0 mm	42,0 mm	19,0 mm	7,0 g
M50x1,5	-55 / +70	32,0 mm	26,0 mm	44,0 mm	25,0 mm	8,0 g
M63x1,5	-55 / +70	39,0 mm	34,0 mm	45,0 mm	32,0 mm	9,0 g

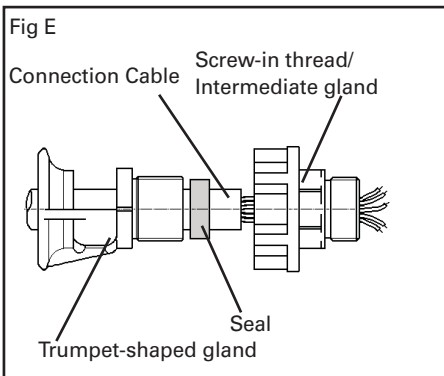
* for multiple glands M25x1,5 and M32x1,5

Dimension drawings and dimensions in mm **1.7 Trumpet-shaped glands M20 to M63**

ATEX type examination certificate:	PTB 00 ATEX 3121	
Marking acc. to 2014/34/EU and standard:	EN 60079-0	
	⊕ II 2 G Ex e II	
	⊕ II 2 D Ex tD A21 IP66	
IECEX type examination certificate:	IECEX BK1 08.0007	
Category of application:	IEC60079-0	
	Ex e II	
	Ex tD A21 T85°C IP66	
Perm. storage temperature in original packing:	-20° C +40° C	
Degree of protection to IEC/EN 60529:	IP 66 (fully assembled)	

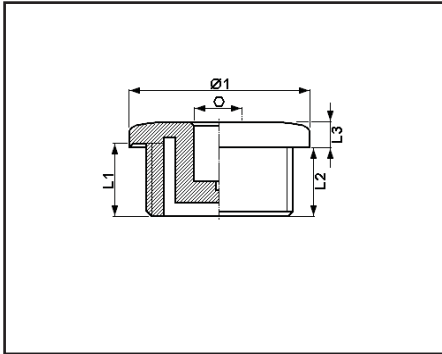


Type	SW	L1	L2	E width across corners	weight app.
M20x1.5	27 mm	64 mm	15 mm	47 mm	57 g
M25x1.5	32 mm	65 mm	15 mm	51 mm	68 g
M32x1.5	41 mm	80 mm	15 mm	68 mm	138 g
M40x1.5	50 mm	86 mm	15 mm	81 mm	191 g
M50x1.5	60 mm	95 mm	16 mm	96 mm	325 g
M63x1.5	75 mm	105 mm	16 mm	107 mm	757 g



Type	Operating temperature °C	Impact re-sistant Joule	Cable diameter		strain Relief (screws)		Screw-in thread Nm
			min. Ø	max. Ø	Nm	Nm	
			Trumpet-shaped gland				
M20x1,5	-40 - 85	< 7	8,0	13,0	3,0	1,5	3,5
M25x1,5	-40 - 85	< 7	11,0	16,0	3,0	2,0	4,0
M32x1,5	-40 - 85	< 7	15,0	20,0	6,0	4,0	7,5
M40x1,5	-40 - 85	< 7	19,0	27,0	10,0	6,0	12,0
M50x1,5	-40 - 85	< 7	26,0	34,0	30,0	10,0	35,0
M63x1,5	-40 - 85	< 7	35,0	46,0	40,0	15,0	45,0

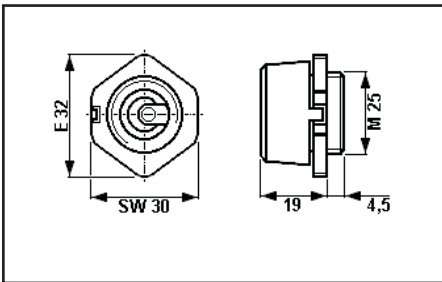
Dimension drawings and dimensions in mm

1.8 Screw plugs

ATEX type examination certificate:	PTB 98 ATEX 3130	
Marking acc. to 2014/34/EU and standard:	EN 60079-0	
	⊕ II 2 G Ex IIC Gb	
	⊕ II 2 D Ex tb IIIC Db IP66 (not for M63x1,5)	
IECEX type examination certificate::	IECEX PTB 03.0000	
Category of application:	IEC60079-0	
	Ex IIC Gb	(not for M63x1,5)
	Ex tb IIIC Db IP 66	(not for M63x1,5)
Perm. storage temperature in original packing:	-20° C +40° C	
Degree of protection to IEC/EN 60529:	(fully assembled)	
	M12- M50	IP 66
	M63	IP 54

Type	Operating temperature / °C	Ø 1	L1	L2	L3	Screw-in thread in enclosure / Nm	weight app.
M16x1,5	-55 / +95	21 mm	12 mm	11 mm	4,0 mm	3,3	2,4 g
M20x1,5	-55 / +95	25 mm	13 mm	12 mm	4,0 mm	2,7	4,3 g
M25x1,5	-55 / +95	30 mm	13 mm	12 mm	4,0 mm	3,0	6,6 g
M32x1,5	-55 / +95	37 mm	15 mm	14 mm	5,5 mm	5,0	12,0 g
M40x1,5	-55 / +95	45 mm	15 mm	14 mm	5,5 mm	7,5	36,6 g
M50x1,5	-55 / +95	55 mm	16 mm	15 mm	5,5 mm	7,5	56,6 g
M63x1,5	-20 / +80	72 mm	/mm	12 mm	11,0 mm	7,5	64,5 g

⊕ = Socket head spanner or screw driver, size 8 mm

1.9 Drain plug

ATEX type examination certificate:	PTB 01 ATEX 1128 X	
Marking acc. to 2014/34/EU and standard:	EN 60079-0	
	⊕ II 2 G Ex e II	
Permissible operating temperature range:	-20° C +40° C	
Perm. storage temperature in original packing:	-20° C +40° C	
Degree of protection to IEC/EN 60529:	IP 66 (fully assembled)	
Screw-in thread in enclosure:	M25x1,5	
Test torque:	5,0 Nm	

2 Legend

Caution

This symbol warns of a possible failure. Failure to observe this caution may result in the total failure of the device or the system or plant to which it is connected.



Special conditions:

This symbol indicates that special conditions apply for a safe operation in accordance with the EC Type Examination Certificate / IECEx Certificate of Conformity.

2.1 Safety instructions



The operations must be carried out by electrical suitably trained in hazardous area with knowledge of increased safety explosion protection IEC/EN 60079-14.

All the entries and components listed in these operating and mounting instructions are not suited for use in Zone 0 and Zone 20.

In addition, they may not be used as direct cable entries or seals for flameproof enclosures in potentially explosive atmospheres in Zone 1, Zone 2 and Zone 21, Zone 22.

They shall be used for their intended purpose and shall be in a perfect and clean state.

Prior to mounting, check the entries and components, as well as the screw-in threads of the apparatus into which they are to be mounted to ensure that they are in a perfect state.

The requirements of the IEC/EN 60079-0 and EN/IEC 60079-31 regarding excessive dust deposits and temperature to be considered from the user.

The national safety rules and regulations for the prevention of accidents, as well as the safety instructions included in these operating instructions, that, like this text, are set in italics, shall be observed!

3 Conformity with standards

They have been designed, manufactured and tested according to the state of the art and to DIN EN ISO 9001 and EN ISO/IEC 80079-34.

The apparatus are conform to the standards specified in the EC-Declaration of conformity, enclosed separately.

References to standards and directives in these operating instructions always relate to the latest version. Other additions (e.g. details relating to the year) shall be observed.

4 Field of application

The entries and components covered by these instructions (see Technical Data) are suited for mounting in potentially explosive atmospheres in Zone 1, Zone 2 and Zone 21, Zone 22 accordance with IEC/EN 60079-10-1 and IEC/EC 60079-10-2!

The materials used, including the exterior metal parts, are high quality materials that ensure a corrosion resistance and resistance to chemical substances according to the requirements for use in a "normal industrial atmosphere":


- impact resistant polyamide
- stainless steel

In case of use in an extremely aggressive atmosphere, please refer to manufacturer

5 Application / Properties

All the cable entries and components covered by these operating and mounting instructions are suited for use in enclosures and apparatus in the type of protection "Increased Safety".

Trumpet-shaped cable glands are used for feeding flexible cables into enclosures and apparatus.


 The fitting of seal inserts one inside the other or the interchanging of seal inserts of different entries to reduce the cable opening is not permitted.

Reducing glands can be used to reduce the size of threaded or through holes in enclosures to a smaller thread size.


Blanking plugs are used to seal metric COOPER CROUSE-HINDS cable entries and COOPER CROUSE-HINDS multiple entries.


Screw glands are used to seal unused through and threaded holes.

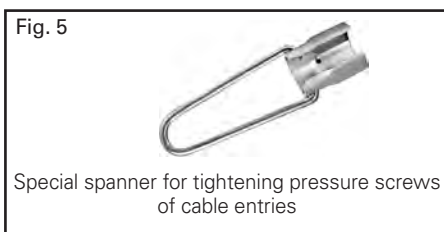
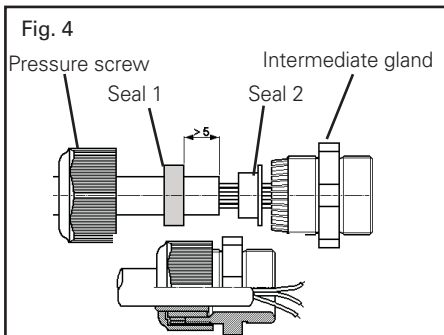
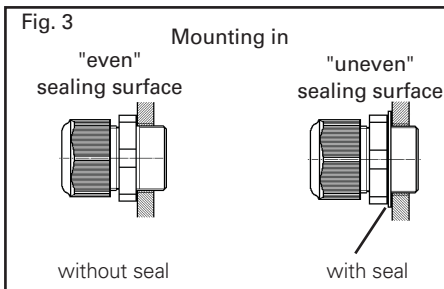
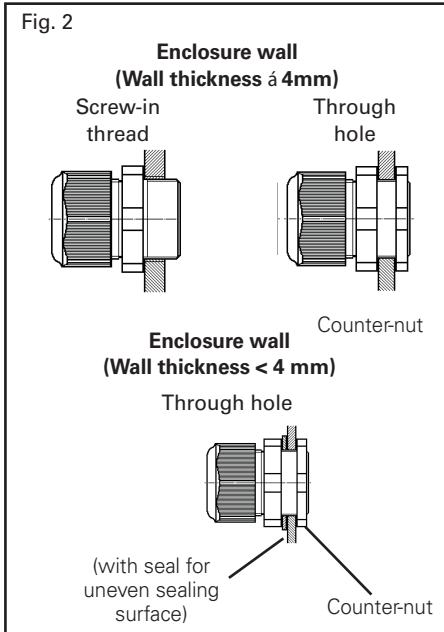
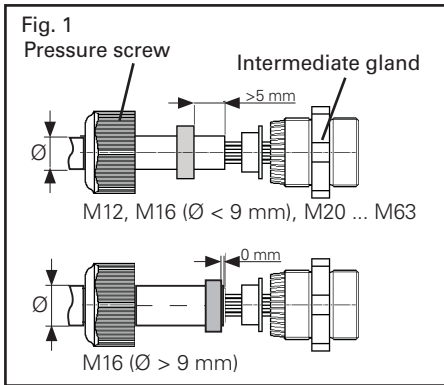
Any condensation in the apparatus can escape via drain plugs (see 6.1, Mounting).

 Applications other than those described are not permissible without a written declaration of consent from Messrs. COOPER CROUSE-HINDS.

 The instructions according to section 7 of the operating instructions shall be observed during operation.

 The sole responsibility with respect to the suitability and proper use of these entry components with regard to the basic conditions of these instructions (see Technical Data) lies with the operator.

 The EC-Type Examination Certificate and any future supplements thereto shall, at the same time, be regarded as supplements to the EC-Type Examination Certificates PTB 99 ATEX 3128 X and PTB 99 ATEX 3101 X.



6 Installation

The relevant national regulations and the generally recognized rules of engineering apply for the installation and operation. (IEC/EN 60079-14).

⚠ The improper installation and operation of enclosures can result in the invalidation of the guarantee.

⚠ Observe the special operational conditions accordance to IEC/EN 60069-14.

⚠ Only fixed cables may be used. The operator shall ensure that an appropriate strain relief is provided. This is not required for trumpet-shaped glands.

⚠ The degree of protection IP66 is only attained if the seals and cable entries are installed correctly.

⚠ Cable entries that are only suited for a low impact energy shall be built into an enclosure in such a way as to protect them from a mechanical impact energy.

6.1 Mounting

⚠ Prior to mounting, ensure that the threads of the entry components match the threads of the apparatus or enclosure.

⚠ If the entries and components are to be screwed directly into the walls, the wall thickness of the apparatus shall be at least 4 mm.

⚠ Counter-nuts shall be used if enclosure walls are less than 4 mm thick. The minimum thickness of the enclosure wall shall be 1.5 mm.

⚠ The use of entry elements with damaged or dirty threads can impair the IP degree of protection.

⚠ Imported Cables and wiring shall be relieved of tensile forces (eg with a cable clamp).

6.1.1 Cable entries (KLE)

The intermediate gland (see Fig. 1) of the cable entries shall be fitted with a suitable tool, e.g. fork, ring or box spanner.

It is mounted directly in the threaded hole or via the through hole of the enclosure (see Fig. 2).

If the sealing surfaces are uneven, seals shall be used between the enclosure wall and the intermediate gland (see Fig. 3).

Counter-nuts shall be used for walls with a thickness of less than 4 mm (see Fig. 2).

Cables are fed in as shown in Fig. 4.

The seal inserts shall be chosen to suit the respective cable diameter (Page 13 Figs. A, B, C and D).

Use COOPER CROUSE-HINDS spanners with a side opening can be used to facilitate the tightening of the pressure screw when the cable entry has been mounted (see Fig. 5).

Order No. GHG 960 1951 R0001 for Set 1 (M12, 16, 20, 25, 32 and 40)

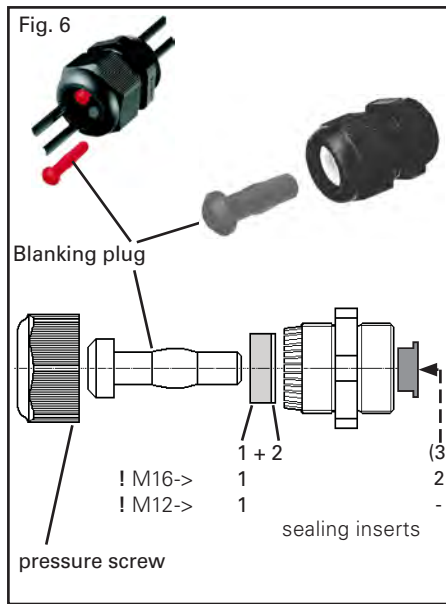
Order No. GHG 960 1951 R0002 for Set 2 (M50 and M63)

To ensure the required minimum degree of protection, the gland body and the pressure cap shall be tightened with the given test torques (see Technical Data).

When tightening the pressure cap, the gland body shall be prevented from turning with a suitable tool, e.g. a spanner.

⚠ Overtightening can impair the degree of protection.

Optionally, cable entries with colour-coded (light blue) pressure screws can be used for intrinsically safe circuits (see main COOPER CROUSE-HINDS catalogue for order numbers).

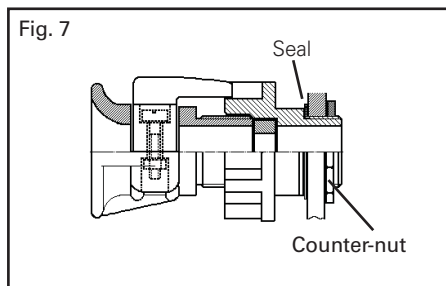


6.1.2 Blanking plugs

⚠ Blanking plugs of the types GGH 960 6107 P**** or GHG 960 1944 R**** may only be used in conjunction with cable entries of the types GHG 960 92** P**** or GHG 960 19** R****.

The following shall be observed when mounting blanking plugs for COOPER CROUSE-HINDS metric cable entries (see Fig. 6):

1. Only the blanking plug associated to the KLE shall be used.
2. When closing the gland with a blanking plug, always use sealing inserts 1+2!
3. The head of the blanking plug shall, as shown in Fig. 6, be on the outside.
4. The blanking plug shall be pushed into the KLE until it reaches the stop.
5. The pressure screw of the KLE shall be tightened down as described in 6.1.1.



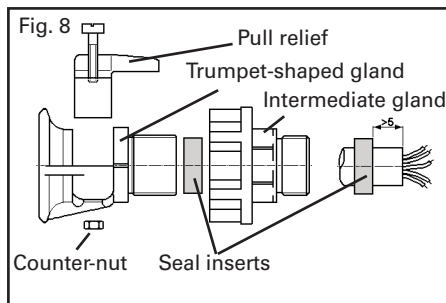
6.1.3 Screw plug

The screw plug shall be screwed tightly into the threaded hole in the enclosure using a suitable tool, e.g. 8 mm socket head spanner or a suitable screw driver.

A counter-nut shall be used for through holes or enclosures that are less than 4 mm thick.

An additional seal shall be used for uneven sealing surfaces.

⚠ In general, the M50 screw plug shall be mounted together with the seal supplied.



6.1.4 Trumpet-shaped gland

A suitable tool, e.g. a fork spanner, shall be used for mounting the intermediate gland in the trumpet-shaped gland in such a way that it cannot twist.

It is necessary to ensure that the gland cannot twist once the cable has been fed in and the trumpet-shaped gland mounted (e.g. by using a counter-nut, see Figs. 7 + 8). A counter-nut shall be used for through holes or enclosures that are less than 4 mm thick. When mounting, a seal shall always be used between the enclosure wall and intermediate gland (see Fig. 7).

The following describes the mounting of the cable in the trumpet-shaped gland, as shown in Fig. 8:

1. Cut out the individual rings of the "onion ring" seal insert to match the respective cable diameter.
2. After feeding in the cable, that has been cut to length and has the seal mounted, into the intermediate gland, screw the trumpet-shaped gland tightly into the intermediate gland to seal off the cable.
3. Then mount the pull relief on the trumpet-shaped gland.

⚠ It is necessary to ensure that there is sufficient pull relief, that damage to the cable is not possible and that the trumpet-shaped gland cannot twist.

6.1.5 Reducing gland

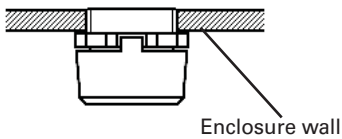
A suitable tool, e.g. a fork, ring or box spanner, shall be used for screwing the reducing gland tightly into the threaded hole in the enclosure.

A counter-nut shall be used for through holes or enclosures that are less than 4 mm thick.

An additional seal shall be used for uneven sealing surfaces.

⚠ Screwing several reducing glands one inside the other to reduce the size of the entry thread is not permitted.

Fig. 9



6.1.6 Drain plug

A suitable tool, e.g. a fork, ring or box spanner, shall be used for screwing the drain plug tightly into the threaded hole in the enclosure.

An additional seal shall be used for uneven sealing surfaces.

The drain plug shall be mounted at the lowest point of the apparatus or enclosure (see Fig. 9).

⚠ The minimum wall thickness may not be less than 4 mm.

Entry components shall be screwed in tightly to ensure the specified minimum degree of protection (see Technical Data for test torques).

⚠ Overtightening can impair the degree of protection.

6.2 Putting into operation

Prior to putting the mounted entry components into operation, the tests specified in the individual national regulations shall be performed.

In addition to this, prior to putting the entries into operation, the correct mounting shall be checked in accordance with these operating and mounting instructions and any other applicable regulations.

⚠ In locations where they are particularly at risk, the entries shall be safeguarded against being torn out of the apparatus or enclosure walls by external mechanical influences (e.g. by fork lift trucks, by knocking or similar).

7 Maintenance / Servicing

⚠ The valid national regulations for the servicing / maintenance of electrical apparatus for use in potentially explosive atmospheres shall be observed (e.g. IEC/EN 60079-17).

The necessary intervals between servicing depend upon the specific application and shall be stipulated by the operator according to the respective operating conditions.

As part of the routine testing, above all, parts on which the explosion protection depends shall be checked (e.g. intactness of entry components and seals).

Pressure screws of cable entries, trumpet-shaped glands or trumpet-shaped cable entries shall be checked at regular intervals to ensure that they are screwed in tightly and, if necessary, they shall be tightened down.

If, in the course of servicing, it is ascertained, that repairs are necessary, section 8 of these operating instructions shall be observed.

8 Repairs / Modifications

Only original COOPER CROUSE-HINDS parts shall be used for carrying out repairs that concern the explosion protection.

⚠ Repairs that affect the explosion protection may only be carried out by COOPER CROUSE-HINDS or by a qualified electrician in compliance with the respective national regulations (e.g. IEC/EN 60079-19).

Modifications to the entry components are not permitted.

9 Disposal / Recycling

The respective valid national regulations for waste disposal shall be observed when disposing of apparatus.

To facilitate recycling of individual parts, parts made of moulded plastic bear the marking for the type of plastic used.

The product range is subject to changes and additions.



IPC

OPERATION AND MAINTENANCE MANUAL

STATIC DISSIPATIVE / GROUNDED
INDUSTRIAL VACUUM CLEANER SYSTEM
ELECTRICALLY OPERATED
FOR DRY RECOVERY

MODEL: PLANET 22 S ATEX

DUST CLASS "H"

CE  II 3 D

Ex h tc IIIC T200°C Dc IP6X

IP Cleaning S.r.l.
via E.Fermi,2
CASTELVERDE (CR) - ITALY
<http://www.ipcworldwide.com>

**READ ALL INSTRUCTIONS BEFORE OPERATING,
CLEANING OR SERVICING**

IMPORTANT - SAVE THESE INSTRUCTIONS

Table of Contents

1.0 INSPECTION	3
2.0 APPLICATIONS.....	3
3.0 IMPORTANT SAFETY PRECAUTIONS.....	5
4.0 PRE-USAGE INSTRUCTIONS AND IMPORTANT SAFETY PRECAUTIONS..	8
5.0 PRE-CAUTIONS FOR THE RECOVERY OF HAZARDOUS MATERIALS	10
6.0 GROUNDING INSTRUCTIONS	11
7.0 TESTING FOR GROUND CONTINUITY	12
8.0 FILTRATION SYSTEM	13
9.0 OPERATING INSTRUCTIONS FOR DRY RECOVERY	14
10.0 CLEANING AND MAINTENANCE	15
11.0 ASSEMBLING AND REPLACING THE HEPA FILTERS.....	16
12.0 STORAGE.....	19
13.0 TECHNICAL SPECIFICATIONS.....	19
14.0 TROUBLESHOOTING:.....	20
15.0 EU DECLARATION OF CONFORMITY	21
16.0 ANNEXES	22

1.0 INSPECTION

Carefully unpack and inspect your IPCLEANING Vacuum Cleaner for shipping damage. Each vacuum cleaner is tested and thoroughly inspected before being shipped; therefore, any damage is the responsibility of the delivering carrier, who should be notified.

2.0 APPLICATIONS

WARNING: A complete risk assessment has to be conducted by the user for the recovery of dusts in hazardous areas. The recommendations in this manual cannot, in any case, supplant the conclusions of a risk assessment.

IPCLEANING PLANET 22 S ATEX is a static dissipative / grounded industrial vacuum cleaner system, electrically operated for use in potentially explosive atmospheres classified ATEX zone 22 for dust.

PLANET 22 S ATEX vacuum cleaners are certified in conformance with Directive 2014/34/EU for Group II, Category 3. The vacuum cleaners bear the following marking:

  II 3 D
Ex h tc IIIC T200°C Dc IP6X

For this equipment an internal control of production according to Directive 2014/34/EU has been performed. The examination and tests results are recorded in a confidential report.

WARNING: THIS VACUUM CLEANER IS NOT DESIGNED TO BE USED IN ZONES 20 OR 21 HAZARDOUS AREAS. DO NOT USE THIS VACUUM CLEANER IN ZONES 20 OR 21 HAZARDOUS AREAS.

WARNING: This vacuum cleaner is designed for the recovery of dry materials only. Do not recover liquids.

WARNING: Only tools and accessories provided by the manufacturer shall be used with this vacuum cleaner. The use of other tools and accessories may impair safety.

2.1. APPLICATIONS IN POTENTIALLY EXPLOSIVE ATMOSPHERES IN PRESENCE OF FLAMMABLE GASES, VAPORS OR LIQUIDS

WARNING: THIS VACUUM CLEANER IS NOT DESIGNED TO BE USED IN HAZARDOUS AREAS CONTAINING FLAMMABLE GASES, VAPORS OR LIQUIDS. DO NOT USE THIS VACUUM CLEANER IN HAZARDOUS AREAS CONTAINING FLAMMABLE GASES, VAPORS OR LIQUIDS.

2.2. APPLICATIONS IN POTENTIALLY EXPLOSIVE ATMOSPHERES IN PRESENCE OF COMBUSTIBLE DUST

PLANET 22 S ATEX series are electrically operated, static dissipative / grounded industrial vacuum cleaner systems designed and certified for use in **ATEX Zone 22** classified areas in which an explosive atmosphere in the form of a cloud of combustible dust in air is not likely to occur in normal operation but – if it does occur – will persist for a short period only

Model PLANET 22 S ATEX can be used to recover:

- Combustible flyings
- Combustible carbonaceous dusts (Carbon black, charcoal, coal or coke dusts)
- Flour, grain, wood, plastic and chemicals
- A maximum of 2 kilos (5 pounds) of conductive dusts or metal dusts

WARNING: For the recovery of a more than 2 kilos (5 pounds) of conductive dusts or metal dusts we recommend the use of an optional “wet mix” immersion separator to precipitate the dusts into a liquid bath.

WARNING: DO NOT RECOVER ANY HOT EMBERS OR IGNITED DUSTS.

3.0 IMPORTANT SAFETY PRECAUTIONS

3.1. MOTOR COOLING AIR INTAKE

WARNING: **DO NOT WRAP THE ELECTRIC CABLE AROUND THE MOTOR COOLING AIR INTAKE OR OBSTRUCT THE MOTOR COOLING AIR INTAKE IN ANY WAY DURING OPERATION. THIS WOULD PREVENT AIR TO COOL DOWN THE MOTOR, THE TEMPERATURE OF THE MOTOR WOULD RISE, AND THIS WOULD STOP THE VACUUM CLEANER.**



Motor cooling air intake must remain unobstructed at all time during operation



3.2. FILTER BLOCKAGE WARNING LIGHT

A filter blockage warning light is installed on the vacuum cleaner. The light turns on to indicate a loss of suction. In such case the collection bag may be full, cloth filters (main filter and safety filter) may need to be washed or HEPA filters may need to be replaced.

WARNING: When the filter blockage warning light turns on, turn the vacuum cleaner off as soon as possible as filter blockage cause the temperature inside the vacuum cleaner to rise and can also lead to motor damage.

For maintenance refer to “Cleaning and maintenance” and to “Assembling and replacing the HEPA filters” sections.

3.3. LAYERS OF DUST

WARNING: Clean regularly the vacuum cleaner surfaces with a water damped cloth to avoid dust accumulation which could create a potential source of ignition.

3.4. TEMPERATURE LIMITATION

In presence of dust clouds

WARNING: The maximum surface temperature of the vacuum cleaner is 200°C. This equipment **shall not be used in presence of a dust cloud which the minimum ignition temperature is less than 300°C.**

In presence of dust layers

WARNING: The maximum surface temperature of the vacuum cleaner is 200°C. This equipment **shall not be used in presence of a dust layer of 5mm which the minimum ignition temperature is less than 275°C.**

3.5. BURNING MATERIAL

WARNING: DO NOT PICK-UP ANYTHING THAT IS BURNING OR SMOKING, SUCH AS HOT ASHES, CIGARETTES, MATCHES OR LIVE EMBERS.

3.6. FLAMMABLE LIQUIDS

WARNING: THIS VACUUM CLEANER IS NOT DESIGNED TO RECOVER FLAMMABLE LIQUIDS. DO NOT USE THIS VACUUM CLEANER TO RECOVER FLAMMABLE LIQUIDS.

3.7. CONDUCTIVE AND METAL DUSTS

WARNING: For the recovery of a more than 2 kilos (5 pounds) of conductive dusts or metal dusts we recommend the use of an optional “wet mix” immersion separator to precipitate the dusts into a liquid bath.

3.8. SELF-IGNITION OF DUST

WARNING: DO NOT USE THIS VACUUM CLEANER TO RECOVER DUST OR MIXTURE OF DUSTS THAT CAN SELF-IGNITE.

3.9. IMPORTANT SAFETY PRECAUTIONS IN REGARD TO ELECTROSTATIC CHARGES GENERATION

When the vacuum cleaner is used as recommended in this manual it has been determined that no significant or continuous electrostatic charge accumulation, which could act as a potential ignition source, can occur.

Nevertheless, it is recommended for safe use not to perform any specific action on the insulating items assembled on the vacuum cleaner, such as a continuous and intense manual rubbing, which could lead to a significant electrostatic charge accumulation.

The above instructions are to be observed particularly in regard to the plastic wheel covers.

4.0 PRE-USAGE INSTRUCTIONS AND IMPORTANT SAFETY PRECAUTIONS

WARNING: This vacuum cleaner must be properly grounded. DO NOT OPERATE UNIT WITHOUT A PROPER GROUND SOURCE.

WARNING: The vacuum cleaner unit is completely grounded and use special static-free materials. Use only original replacement parts from the manufacturer or from one of its authorized distributors.

WARNING: The vacuum cleaner is supplied without an electrical plug. It is the user's responsibility to install a suitable plug certified for the hazardous area classification.

WARNING: The plug should be installed by a qualified electrician only. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

WARNING: This appliance is for dry use only and is not to be used or stored outdoors in wet conditions.

WARNING: Before use, operators should be provided with information, instruction and training for the use of the appliance and the substances for which it is to be used, including the safe method of removal and disposal of the material collected

WARNING: For user servicing, the machine shall be dismantled, cleaned and serviced, as far as is reasonably practicable, without causing risk to the maintenance staff and others. Suitable precautions include decontamination before dismantling, provision for local filtered exhaust ventilation where the machine is dismantled, cleaning of the maintenance area and suitable personal protection.

WARNING: The manufacturer, or an instructed person, shall perform a technical inspection at least annually, consisting of, for example, inspection of filters for damage, air tightness of the machine and proper function of the control mechanism. In addition, on class H machines, the machine filtration efficiency should be tested at least annually, or more frequently as may be specified by national requirements.

WARNING: the outside of the machine should be decontaminated by vacuum cleaning methods and wiped clean or treated with sealant before being taken out of a hazardous area. All the machine parts shall be regarded as contaminated when removed from the hazardous area and appropriate action taken to prevent dust dispersal

WARNING: This appliance is not suitable to pick up dusts or liquids of high explosion risk, nor mixtures of combustible dust with liquids.

WARNING: Improper use of this vacuum cleaner will result in the voiding of the warranty.

- a. Consult local electric code and authority having jurisdiction before using. Make sure that the electrical installation is compatible with the voltage stated on the nameplate.
- b. Examine the vacuum cleaner's power cable for damage (cracking or ageing) before every use. Return to manufacturer for servicing if damaged. Use only the power cable supplied with the unit or one purchased from the manufacturer.
- c. Do not pull vacuum cleaner by the power cable.
- d. Turn off the vacuum cleaner and unplugged the power cable before servicing or storing the vacuum cleaner. Clean and service this vacuum cleaner **only in a NON-HAZARDOUS AREA.**
- e. This vacuum cleaner is designed for indoor use only.
- f. The tank should be clean and dry before using the vacuum cleaner.
- g. The appliance shall only be operated when all filters are in position and undamaged. (See paragraph regarding the filtration system)
- h. Connect to a properly grounded outlet only. See Grounding Instructions.
- i. Only use the right ATEX extension cord according to risk assessment of the end user.
- j. For dusts with an ignition energy less than 1mJ additional restrictions of the labour authorities may apply.

5.0 PRE-CAUTIONS FOR THE RECOVERY OF HAZARDOUS MATERIALS

WARNING: Model PLANET 22 S ATEX (not equipped with a HEPA filter) is not suitable for the recovery of hazardous materials.

DANGER: If the vacuum cleaner is used to recover toxic or nuisance materials, the following safety precautions must be taken:

- a. The vacuum cleaner must be equipped with a HEPA filter.
- b. Service and operation should only be carried out by trained personnel.
- c. Appropriate clothing and personal protective equipment should be worn when operating or servicing the vacuum cleaner.
- d. Dispose of collected materials responsibly. Follow applicable government regulations for the disposal of hazardous materials.

WARNING: This appliance contains dust hazardous to health. Emptying and maintenance operations, including removal of the dust collection means, must only be carried out by authorized personnel wearing suitable personal protection. Do not operate without the full filtration system fitted.

NOTE: Any health hazard associated with the use of this vacuum cleaner in conjunction with the recovery of asbestos and other hazardous substances has not been investigated.

6.0 GROUNDING INSTRUCTIONS

This vacuum cleaner must be properly grounded. If it should malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This vacuum cleaner is equipped with a cord having an equipment-grounding conductor. The vacuum cleaner is supplied without an electrical plug. It is the user's responsibility to install a suitable plug certified for the hazardous locations area classification.

The plug should be installed by a qualified electrician only. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances. Ensure that the fuse/breaker on the electrical panel is of the correct rating and exceeds the maximum current rating shown on the technical data sticker of the vacuum unit. Test the electrical continuity of the vacuum cleaner prior to each use. (See section 6: testing for ground continuity).

WARNING: This vacuum cleaner for hazardous locations is equipped with conductive wheels, which allow for the vacuum cleaner to be grounded with the floor. Do not substitute the conductive wheels and use only replacement conductive wheels supplied by the manufacturer.

WARNING: Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or service person if you are in doubt as to whether an outlet is properly grounded. If the plug will not fit the outlet, have a proper plug or outlet installed by a qualified electrician. No adaptor should be used with this vacuum cleaner

WARNING: To effectively dissipate static electricity and to ensure spark-free operation, this vacuum cleaner must be grounded during use.

DANGER: Do not operate vacuum cleaner if the electrical outlet is not properly grounded or if the grounding is questionable.

7.0 TESTING FOR GROUND CONTINUITY

WARNING: Test the electrical continuity of the vacuum cleaner before each use. This will ensure that any static electricity that is produced while vacuuming will be discharged to ground.

WARNING: Use only original replacement parts from the manufacturer or from one of its authorized distributors.

An ohm-meter is required to perform the following electrical continuity test.

- a. Disconnect the power cable from the outlet.
- b. Make sure that all the latches on the vacuum cleaner are fastened and that the detachable recovery tank is properly installed on the vacuum cleaner.
- c. Disconnect the suction hose from the vacuum cleaner.
- d. Using an ohm-meter, test the electrical continuity of the vacuum cleaner from the ground pin at the end of the power cable to the suction intake of the vacuum cleaner. A reading of 10^9 ohms or less is satisfactory to ensure proper grounding and static dissipation.
- e. Using the ohm-meter test for the electrical continuity of the suction hose from one end to the other. A reading of 10^9 ohms or less is satisfactory to ensure proper grounding and static dissipation.

8.0 FILTRATION SYSTEM

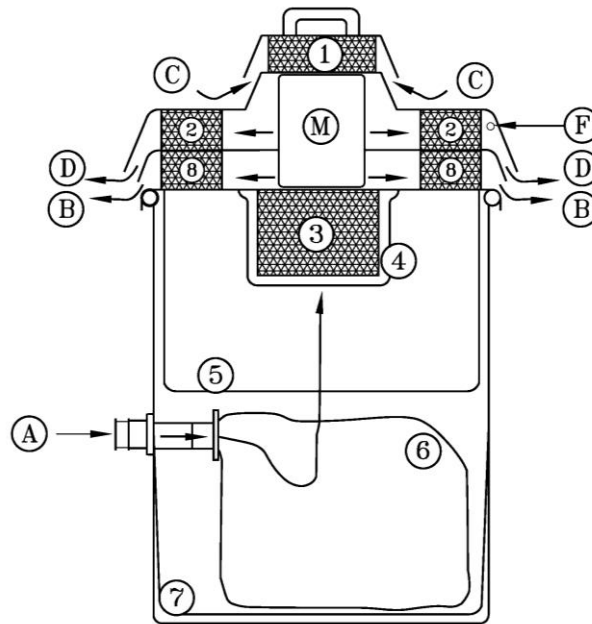


Figure 1

1. ABSOLUTE HEPA FILTER FOR MOTOR COOLING AIR INTAKE (*Efficiency > of 99.995% on 0.3 micron.*)
 2. ABSOLUTE HEPA FILTER FOR MOTOR COOLING AIR EXHAUST (*Efficiency > of 99.995% on 0.3 micron.*)
 3. ABSOLUTE HEPA FILTER FOR WORKING AIR INTAKE (*Efficiency > of 99.995% on 0.3 micron.*)
 4. SAFETY FILTER (STATIC DISSIPATIVE)
 5. MAIN CLOTH FILTER (STATIC DISSIPATIVE)
 6. COLLECTION BAG (STATIC DISSIPATIVE)
 7. POLY LINER RECOVERY BAG (STATIC DISSIPATIVE)
 8. ABSOLUTE HEPA FILTER FOR WORKING AIR EXHAUST (*Efficiency > of 99.995% on 0.3 micron.*)
-
- A. SUCTION INLET
 - B. WORKING AIR EXHAUST
 - C. MOTOR COOLING AIR INTAKE
 - D. MOTOR COOLING AIR EXHAUST
 - F. FILTER BLOCKAGE WARNING LIGHT
 - M. MOTOR

9.0 OPERATING INSTRUCTIONS FOR DRY RECOVERY

WARNING: This vacuum cleaner is designed for the recovery of dry materials only. Do not recover liquids.

1. Disengage the latches and remove the power head from the recovery tank.
2. Place the poly liner (item # 7 on Fig. 1) at the bottom of the tank

NOTE In order to prevent the poly liner from being vacuumed up during use; press the bag along the interior walls and bottom of the recovery tank in order to remove any trapped air.

3. Place the collection bag (item # 6 on Fig. 1) in the recovery tank on the air intake
4. Place the main cloth filter (item # 5 on Fig. 1) on the recovery tank. Make sure that the filter's gasket covers the circumference of the recovery tank lip.

IMPORTANT: Do not use this vacuum cleaner for dry recovery if the cloth filters are not installed

5. Place the power head on the recovery tank and fasten the latches.
6. Fasten hose to suction intake on side of recovery drum and attach desired tools to hose.
7. To turn on the vacuum cleaner, turn switch to the ON position
8. To shut off unit, turn switch to the OFF position. Disconnect the power cable when not in use.

10.0 CLEANING AND MAINTENANCE

FILTER BLOCKAGE WARNING LIGHT:

A filter blockage warning light is installed on the vacuum cleaner. The light turns on to indicate a loss of suction. In such case the collection bag may be full, cloth filters (main filters and safety filters) may need to be washed or HEPA filters may need to be replaced.

WARNING: When the filter blockage warning light turns on, turn the vacuum cleaner off as soon as possible as filter blockage cause the temperature inside the vacuum cleaner to rise and can also lead to motor damage.

IMPORTANT: We recommend proceeding with the following maintenance after each use and after a maximum of 8 hours of consecutive use

WARNING: Turn off the vacuum cleaner and disconnect the power cable before performing any servicing or maintenance of the vacuum cleaner.

- a. Dispose of collection bag when full and replace by a new collection bag
- b. Empty and clean the recovery tank.

WARNING: Empty the recovery tank when necessary but also after every use (8 hours shift). Do not allow recovered materials to sit for extended periods of time. An excessive accumulation of recovered materials can create a dust ignition hazard.

- c. It is recommended that the cloth filters be cleaned regularly. Dirty cloth filters will reduce the airflow through and reduce the performance of the vacuum cleaner. The cloth filters (main filters and safety filters) can be washed with warm water (no detergents required).

IMPORTANT: After washing the filters, make sure that they are completely dry before reinstalling them in the vacuum. Do not reinstall the cloth filters if they are still wet.

- d. The cloth filters should be replaced every two or three years depending on use.
- e. Inspect the cloth filters regularly. If the cloth filters are torn, replace immediately. A torn filter will allow dust and other materials to enter the motor and may cause pre-mature wear of the motor
- f. Clean hose to remove any accumulated dust, debris or material recovered.
- g. The HEPA filter should be replaced yearly, or every two years, depending on the use.

WARNING: Do not use the HEPA filter after removal out of the appliance.

WARNING: Keep the power supply cable clean and inspect it regularly for cuts or cracks

WARNING: When carrying out service or repair operations, all contaminated items which cannot be satisfactorily cleaned, are to be disposed of. Such items shall be disposed of in impervious bags in accordance with any current regulation for the disposal of such waste;

WARNING: Clean regularly the vacuum cleaner surfaces with a water damped cloth to avoid dust accumulation which could create a potential source of ignition.

11.0 ASSEMBLING AND REPLACING THE HEPA FILTERS

A HEPA filter is designed for filtration of ultra-fine particles. A clogged HEPA filter will reduce the air flow thereby reducing the vacuum's performance thus requiring replacement.

The life of the HEPA filters depends greatly on the use of the vacuum cleaner. It is recommended that the HEPA filters be replaced once a year if the vacuum is used intensively (daily). The filters can be replaced every two years if the vacuum cleaner is used less frequently (two or three times per week)

WARNING: If the vacuum cleaner is used for the recovery of toxic materials proper clothing and the use of an appropriate breathing apparatus is necessary when servicing the HEPA filter housing or any other contaminated part of the unit.

**11.1. REPLACEMENT OF THE HEPA FILTER FOR MOTOR COOLING AIR INTAKE
(ITEM #1 ON FIG. 1 SEE SECTION 8 FOR ILLUSTRATION)**

1. Disconnect the power cable from the outlet.
2. Unscrew the three hex nuts securing the top section of the power head to the lid
3. Remove and discard the old HEPA filter
4. Carefully inspect the seal gaskets for wear and breaks. Replace gaskets if defective.
5. Place the new filter on the lid.
6. Securely fasten the top section of the power head to the lid using the three hex nuts.
7. Dispose of the contaminated filter according to government regulations. (If applicable)

**11.2. REPLACEMENT OF THE HEPA FILTER FOR MOTOR COOLING AIR EXHAUST
(ITEM #2 ON FIG. 1 SEE SECTION 8 FOR ILLUSTRATION)**

1. Disconnect the power cable from the outlet.
2. Unscrew the six hex nuts securing the middle section of the power head to the lid
3. Remove and discard the old HEPA filter.
4. Carefully inspect the seal gasket on the HEPA filter. Replace gasket if defective.
5. Place the new filter on the lid.
6. Securely fasten the middle section of the power head to the lid using the six hex nuts.
7. Dispose of the contaminated filter according to government regulations. (If applicable)

11.3. REPLACEMENT OF THE HEPA FILTER FOR WORKING AIR EXHAUST (ITEM #8 ON FIG. 1 SEE SECTION 8 FOR ILLUSTRATION)

1. Disconnect the power cable from the outlet.
2. Unscrew the six hex nuts securing the lower section of the power head to the lid
3. Remove and discard the old HEPA filter.
4. Carefully inspect the seal gasket on the HEPA filter. Replace gasket if defective. (Part # 215372G)
5. Place the new filter on the lid. (# 215372)
6. Securely fasten the lower section of the power head to the lid using the six hex nuts.
7. Dispose of the contaminated filter according to government regulations. (If applicable)

11.4. HEPA FILTER FOR WORKING AIR INTAKE (ITEM #3 SEE SECTION 8 FOR ILLUSTRATION)

1. Disconnect the power cable from the outlet.
2. Disengage the latches and remove the power head from the recovery tank.
3. Remove the safety filter
4. Unscrew the hex nut securing the HEPA filter to the underside of the lid.
5. Discard the old HEPA filter.
6. Carefully inspect the seal gaskets for wear and breaks. Replace gaskets if defective.
7. Insert the new HEPA filter
8. Securely fasten the HEPA filter using the hex nut.
9. Place back the safety filter
10. Dispose of the contaminated filter according to government regulations. (If applicable)

12.0 STORAGE

It is recommended that the inside of the recovery tank be clean and dry when storing the vacuum cleaner.

13.0 TECHNICAL SPECIFICATIONS

Voltage	220-240 V
Hertz	50/60 Hz
Phase	Single
P_m^*	1080 W
Power	1.2 kW
Amperage	5 A
Air Flow	194 m ³ /h
Vacuum Pressure	245 hPa / 2504 mm H ₂ O
Sound Level	72 dB(A)
Plug Type	Not Included
Suction Inlet	60 mm
Cart Type	4 Wheel Dolly (4W)
Dry Recovery - Disposable Filter Bag	19 liters
Length	43 cm
Width	43 cm
Weight (Vacuum Only)	24 kg.
Height	102 cm
Cord Length	10 m

** Normal operation: conditions under which the machine is operated in normal use, obtained at power input P_m of the vacuum motor.*

14.0 TROUBLESHOOTING:

PROBLEM	PROBABLE CAUSE	SOLUTION
Drop in suction power	Cloth filter(s) may be excessively dirty or covered with dust.	Wash or replace the cloth filter(s)
	Recovery tank may be full	Empty the recovery tank
	Suction hose or vacuum tools may be blocked	Clear blockage using a broom handle or other appropriate device
	HEPA filters may be clogged	Change HEPA filters

15.0 EU DECLARATION OF CONFORMITY



Integrated
Professional
Cleaning

EU DECLARATION OF CONFORMITY

IPCleaning S.r.l.

Via E. Fermi 2, 26022 Castelverde (Cremona) , Italia



Declares on its own responsibility that the following equipment:

**Static dissipative / grounded, industrial vacuum cleaner system
Electrically operated for dry recovery, including accessories,**

Model:

PLANET 22 S ATEX

Bearing the following marking:

  II 3 D Ex h tc IIIC T200°C Dc IP6X

To which declaration refers, is designed and manufactured in compliance with the essential requirements and other relevant provisions of the following applicable directives:

1. ATEX directive 2014/34/EU

Compliance has been obtained by application of the following standards:

- EN IEC 60079-0:2018
- EN 60079-31:2014
- EN ISO 80079-36: 2016
- EN ISO 80079-37: 2016
- EN 1127-1:2019

REV 9

For which an internal control of production has been performed

This equipment complies with the electrical safety requirements, as they are expressed in the **Machinery Directive 2006/42/EC**, and has been manufactured in accordance to the following standards:

- EN 60204-1: 2018
- EN 60335-1: 2012 and its Amendment A11: 2014 and A13: 2017
- EN 60335-2-69: 2012

2. The Electromagnetic Compatibility Directive 2014/30/EU

Compliance has been obtained by application of the following standards:

- EN 61000-6-1:2007
- EN 61000-6-3:2007 and its Amendment A1: 2011

Subject to use for the purpose for which it was designed in accordance with relevant standards and with the manufacturer's recommendations. We, the undersigned, hereby declare that the equipment specified above conforms to the listed Directives and standards

Castelverde, July 30, 2021

Legal Representative
dott. Pietro Annibaldi Corsano

16.0 ANNEXES

Refer to the following documents for the necessary information regarding the installation, the maintenance and the compliance of EX certified parts assembled in the equipment.

- Cable gland model GHG 960 - EC Type Examination Certificate No. PTB 14 ATEX 1015X (6 pages)
- Cable gland model GHG 960 – Operating instructions (12 pages)



(1) **EU-TYPE-EXAMINATION CERTIFICATE**
(Translation)

(2) Equipment or Protective Systems Intended for Use in
Potentially Explosive Atmospheres - **Directive 2014/34/EU**

(3) EU-Type Examination Certificate Number:

PTB 14 ATEX 1015 X

Issue: 01

(4) Product: Cable gland type GHG 960 **** * ****

(5) Manufacturer: COOPER Crouse-Hinds GmbH

(6) Address: Neuer Weg Nord 49, 69412 Eberbach, Germany

(7) This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 17 of the Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in the confidential Test Report PTB Ex 16-15133.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0:2012 + A11:2013, EN 60079-7:2015, EN 60079-31:2014

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.


(11) This EU-Type Examination Certificate relates only to the design and construction of the specified product in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

(12) The marking of the product shall include the following:

 **II 2 G Ex eb IIC Gb**
 **II 2 D Ex tb IIIC Db**

Konformitätsbewertungsstelle, Sektor Explosionsschutz
On behalf of PTB:

Braunschweig, January 16, 2017


Dr.-Ing. D. Markus
Oberregierungsrat



sheet 1/6

EU-Type Examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt. In case of dispute, the German text shall prevail.

(13)

SCHEDULE

(14) **EU-Type Examination Certificate Number PTB 14 ATEX 1015 X, Issue: 01**

(15) Description of Product

The cable gland, type GHG 960 **** * ****, made of polyamide serves to introduce permanently laid cables into electrical equipment of the type of protection Increased Safety "eb" and Protection by enclosure "tb". The cable entry is composed of intermediate glands with two different widths of threaded joint, sealing rings of different designs and a cap nut. Accessories are: blanking plug, reducing gland, multiple cable gland, flat cable gland and expansion gland. The cap nut is optionally made in black resp. blue for the distinction of Ex-e and Ex-i circuits.

They are installed in enclosures with through-holes or threaded holes, with or without lock nut.

Technical data

Type	Ø Clamping range in mm	Service temperature	One pcs.	Packing set
Cable Gland M12	Ø 5 – 7	-20°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Cable Gland M16	Ø 5.5 – 7 Ø 7 – 10	-20°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Cable Gland M20	Ø 5.5 – 7 Ø 7 – 9 Ø 9.5 – 13	-20°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Cable Gland M20	Ø 5.5 – 7 Ø 7 – 9 Ø 9.5 – 11	-40°C - +70°C	GHG 960 9248 P****	GHG 960 1955 R****
Cable Gland M25	Ø 8 – 10 Ø 10 – 13 Ø 13.5 – 17.5	-25°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Cable Gland M25	Ø 8 – 10 Ø 10 – 13 Ø 13.5 – 15	-55°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Cable Gland M32	Ø 14 – 17 Ø 17.5 – 21	-55°C - +70°C	GHG 960 9248 P****	GHG 960 1955 R****
Cable Gland M32	Ø 14 – 17 Ø 17.5 – 21	-20°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Cable Gland M40	Ø 19 – 22 Ø 22 – 28	-55°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Cable Gland M50	Ø 24 – 28 Ø 28 – 35	-55°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Cable Gland M63	Ø 29 – 35 Ø 36 – 41 *	-55°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Extension gland M16/M20X1.5	Ø 5.5 – 7 Ø 7 – 9 Ø 9.5 – 13	-20°C - +70°C	GHG 960 9244 P****	GHG 960 1956 R****
Extension gland M20/M25X1.5	Ø 8 – 10 Ø 10 – 13 Ø 13.5 – 15	-20°C - +70°C	GHG 960 9244 P****	GHG 960 1956 R****
Extension gland M25/M32X1.5	Ø 14 – 17 Ø 17.5 – 21	-55°C - +70°C	GHG 960 9244 P****	GHG 960 1956 R****
Extension gland M32/M40X1.5	Ø 19 – 22 Ø 22 – 28	-55°C - +70°C	GHG 960 9244 P****	GHG 960 1956 R****
Extension gland M40/M50X1.5	Ø 24 – 28 Ø 28 – 35	-55°C - +70°C	GHG 960 9244 P****	GHG 960 1956 R****
Extension gland M50/M63X1.5	Ø 29 – 35 Ø 36 – 41 *	-55°C - +70°C	GHG 960 9244 P****	GHG 960 1956 R****
Reducing gland M16-M12		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M20-M12		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M20-M16		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M25-M12		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M25-M16		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M25-M20		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M32-M12		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M32-M16		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M32-M20		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****

sheet 2/6

EU-Type Examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt. In case of dispute, the German text shall prevail.

SCHEDULE TO EU-TYPE EXAMINATION CERTIFICATE PTB 14 ATEX 1015 X, Issue: 01

Reducing gland M32-M25		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M40-M16		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M40-M20		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M40-M25		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M40-M32		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M50-M20		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M50-M25		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M50-M32		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M50-M40		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M63-M25		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M63-M32		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M63-M40		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M63-M50		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Multiple gland M25X1.5 2- fold	Ø 4.5 – 7 -----	-20°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Multiple gland M32X1.5 4- fold	Ø 4.5 – 7 -----	-20°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Flat cable gland M25X1,5	G18 = 12,5 - 9 x 8 - 5 G24 = 14 - 11 x 8 - 6	-55°C - +70°C (+110°C)***	GHG 960 9242 P****	
Cable gland PG 16	**	-20°C - +70°C	GHG 960 9243 P****	
Cable gland PG 16	**	-55°C - +70°C	GHG 960 9243 P****	
Blanking plug for M12	Ø 5	-55°C - +70°C	GHG 960 6107 P****	GHG 960 1944 R****
Blanking plug for M16	Ø 6	-55°C - +70°C	GHG 960 6107 P****	GHG 960 1944 R****
Blanking plug for M20	Ø 7	-55°C - +70°C	GHG 960 6107 P****	GHG 960 1944 R****
Blanking plug for M25	Ø 10	-55°C - +70°C	GHG 960 6107 P****	GHG 960 1944 R****
Blanking plug for M32	Ø 13	-55°C - +70°C	GHG 960 6107 P****	GHG 960 1944 R****
Blanking plug for M40	Ø 19	-55°C - +70°C	GHG 960 6107 P****	GHG 960 1944 R****
Blanking plug for M50	Ø 25	-55°C - +70°C	GHG 960 6107 P****	GHG 960 1944 R****
Blanking plug for M63	Ø 32	-55°C - +70°C	GHG 960 6107 P****	GHG 960 1944 R****
Blanking plug for multiple gland	Ø 5	-55°C - +70°C	GHG 960 6107 P****	GHG 960 1944 R****
* additional sealing ring for the clamping range Ø 41mm up to Ø 48mm				
** the same design as well as the M25 version				
*** Sealing ring for the heat cable of the flat cable gland				

Cable gland M20x1.5 options with slotted seal for the following cables:

Glass fibre cable	Application
Cable Ø. 6.4mm / Breakout inner cable / type: orange	-5°C - +45°C
Cable Ø 7.0mm / Ultra-Fox Plus / type: 903 AG 621 02 709	-20°C - +70°C
Cable Ø 6.8mm / Ehret / ICS 24 / type : 84 305 .. .	-20°C - +60°C
Cable Ø 2mm / Lichtwellenleiter LWL	-20°C - +60°C

Two different length of thread for the cable glands	short = P/R**** long = P/R****
Two different colours for the cable glands	black for Ex-e version = P/R**** blue for Ex-i version = P/R****
Installation in equipment with wall thicknesses of	minimum 1.5 mm
Ingress protection	IP 66

SCHEDULE TO EU-TYPE EXAMINATION CERTIFICATE PTB 14 ATEX 1015 X, Issue: 01

Torque cable gland

Type	Service temperature range	Impact energy	Clamping range	Torque Pressure screw	Torque Gland body
KLE	°C	Joule	Ø mm	Nm	Nm
M16	-20 - +70	low, 4	5.5 – 7.0 7.0 – 10.0	1.0 / 1.0 1.0 / 1.4	3.3
M20	-20 - +70	high, 7	5.5 – 7.0 7.0 – 9.0 9.5 – 13.0	1.5 / 1.0 1.5 / 1.4 1.0 / 1.7	2.7
M20	-40 - +70	low, 4	5.5 – 7.0 7.0 – 9.0 9.5 – 13.0	1.5 / 1.0 1.5 / 1.4 1.0 / 1.7	2.7
M20 split gasket	-20 - +70	high, 7	2,0 7.0 – 9.0	3,5 1.5 / 1.4	2.7
M25	-20 - +70	high, 7	10.0 – 13.0 13.5 – 17.5	2.3 / 2.6 1.3 / 2.3	3.0
M25	-25 - +70	high, 7	8.0 – 10.0 10.0 – 13.0 13.5 – 17.5	1.5 / 2.0 2.3 / 2.6 1.3 / 2.3	3.0
M25	-55 - +70	high, 7	8.0 – 10.0 10.0 – 13.0 13.5 - 15	1.5 / 2.0 2.3 / 2.6 1.5 / 2.3	3.0
M25 flat cable	-55 - +70 (+110°C)	high, 7	5-8x11-12.5 6-8x11-14	5.0 3.5	5.0
PG16	-25 - +70	high, 7	10.0 – 13.0 13.5 – 15.0	2.3 / 2.6 1.5 / 2.3	5.0
PG16	-55 - +70	high, 7	10.0 – 13.0 13.5 - 17.5	2.3 / 2.6 1.3 / 2.3	5.0
M32	-20 - +70	high, 7	14.0 – 17.0 17.5 – 21.0	3.0 / 4.0 1.5 / 1.3	5.0
M32	-55 - +70	high, 7	14.0 – 17.0 17.5 – 21.0	3.0 / 4.0 1.5 / 1.3	5.0
M40	-55 - +70	high, 7	19.0 – 22.0 22.0 – 28.0	3.3 / 5.5 3.3 / 6.7	7.5
M50	-55 - +70	high, 7	24.0 – 28.0 28.0 – 35.0	6.0 / 7.0 5.0 / 7.0	7.5
M63	-55 - +70	high, 7	29.0 – 35.0 36.0 - 41.0	12.0 / 12.0 12.0 / 13.0	7.5

Torque multiple cable gland

Type	Service temperature range	Impact energy	Clamping range	Torque Pressure screw	Torque Gland body
KLE	°C	Joule	Ø mm	Nm	Nm
M25 2-fach	-20 - +70	high, 7	2x 4.5 – 7.0	2.0 / 2.0	3.0
M32 4-fach	-20 - +70	high, 7		3.0 / 3.5	5.0

SCHEDULE TO EU-TYPE EXAMINATION CERTIFICATE PTB 14 ATEX 1015 X, Issue: 01

Torque extension cable gland

Type	Service temperature range	Impact energy	Clamping range	Torque Pressure screw	Torque Gland body
KLE	°C	Joule	Ø mm	Nm	Nm
M16/M20	-20 - +70	high, 7	5.5 – 7.0 7.0 – 9.0 9.5 – 13.0	1.0 / 1.0 1.5 / 1.4 1.0 / 1.7	2.7
M16/M20	-40 - +70	low, 4	5.5 – 7.0 7.0 – 9.0 9.5 – 13.0	1.5 / 1.0 1.5 / 1.4 1.0 / 1.7	2.7
M20/M25	-20 - +70	high, 7	8.0 – 10.0 10.0 – 13.0 13.5 – 17.5	1.5 / 1.0 2.3 / 2.6 1.3 / 2.3	3.0
M20/M25	-55 - +70	high, 7	8.0 – 10.0 10.0 – 13.0 13.5 – 15.0	1.5 / 2.0 2.3 / 2.6 1.5 / 2.3	3.0
M25/M32	-55 - +70	high, 7	14.0 – 17.0 17.5 – 21.0	3.0 / 4.0 1.5 / 1.3	5.0
M32/M40	-55 - +70	high, 7	19.0 – 22.0 22.0 – 28.0	3.3 / 5.5 3.3 / 6.7	7.5
M40/M50	-55 - +70	high, 7	24.0 – 28.0 28.0 – 35.0	6.0 / 7.0 5.0 / 7.0	7.5
M50/M63	-55 - +70	high, 7	29.0 – 35.0 36.0 – 41.0 (41.0 – 48.0)	12.0 / 12.0 12.0 / 13.0 (13.0 / 7.8)	7.5

Nomenclature

GHG 960	****	*	****
1	2	3	4

- 1) Type
- 2) Design see table 1 above
- 3) P = Single part
R = Packing set
- 4) Variants e.g. colour, thread length, blanking elements, size, etc.

Details of change:

- 1) New test according to EN 60079-31:2014 and EN 60079-7:2015.
- 2) The sizes M16 to M25 have got an additional sealing ring.
- 3) The size G26 of the flat cable gland has been changed to G24.
- 4) The minimum ambient temperature of size M25x1.5 is changed to -25 °C

(16) Test Report PTB Ex16-15133

SCHEDULE TO EU-TYPE EXAMINATION CERTIFICATE PTB 14 ATEX 1015 X, Issue: 01

(17) Specific conditions of use

Only permanently installed cables may be entered through the glands. The operating company must ensure that adequate strain relief is provided.

The degree of protection (IP66) will only be met if seals and cable glands are properly fitted. The manufacturer's instructions must be followed.

The types with low impact energy have to be mounted in the enclosure, so they are mechanically protected against impact energy.

The blanking plug type GHG 960 6107 P**** resp. GHG 960 1944 R**** shall only be used with the cable glands type GHG 960 92** P**** resp. GHG 960 19** R****.

(18) Essential health and safety requirements

Met by compliance with the aforementioned standards.

According to Article 41 of Directive 2014/34/EU, EC-type examination certificates which have been issued according to Directive 94/9/EC prior to the date of coming into force of Directive 2014/34/EU (April 20, 2016) may be considered as if they were issued already in compliance with Directive 2014/34/EU. By permission of the European Commission supplements to such EC-type examination certificates and new issues of such certificates may continue to hold the original certificate number issued before April 20, 2016.

Konformitätsbewertungsstelle, Sektor Explosionsschutz
On behalf of PTB:

Braunschweig, January 16, 2017

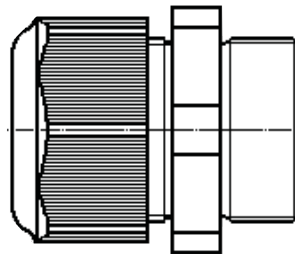

Dr.-Ing. D. Markus
Oberregierungsrat



Explosiongeschützte Kabel- und Leitungseinführungen,
Verschlussstopfen, Schraubverschlüsse, Trompetenverschraubungen,
Reduzierungen und Entwässerungsstopfen

Explosion-protected cable entries, blanking plugs, screw plugs,
trumpet-shaped cable glands, reducing glands and drain plugs

Entrées de câble, bouchons filetés, bouchons de fermeture,
presses-étoupes à trompette, bagues de réduction et bouchons de
purge pour atmosphères explosives



CZ: "Tento návod k použití si můžete vyžádat ve svém mateřském jazyce u příslušného zastoupení společnosti Cooper Crouse-Hinds/CEAG ve vaší zemi."

DK: "Montagevejledningen kan oversættes til andre EU-sprog og rekvireres hos Deres Cooper Crouse-Hinds/CEAG leverandør"

E: "En caso necesario podrá solicitar de su representante Cooper Crouse-Hinds/CEAG estas instrucciones de servicio en otro idioma de la Union Europea"

EST: "Seda kasutusjuhendit oma riigikeeles võite küsida oma riigis asuvasest asjaomasest Cooper Crouse-Hinds/CEAG esindusest."

FIN: "Tarvittaessa tämän käyttöohjeen käännös on saatavissa toisella EU:n kielellä Teidän Cooper Crouse-Hinds/CEAG - edustajaltanne"

GR: *Εάν χρειασθεί, μεταφραση των οδηγιών χρήσεως σε άλλη γλώσσα της ΕΕ, μπορεί να ζητηθεί από τον Αντιπροσωπο της Cooper Crouse-Hinds/CEAG*

H: "A kezelési útmutatót az adott ország nyelvén a Cooper Crouse-Hinds/CEAG cég helyi képviselőtől igényelheti meg."

I: "Se desiderate la traduzione del manuale operativo in un'altra lingua della Comunità à Europea potete richiederla al vostro rappresentante Cooper Crouse-Hinds/CEAG"

LT: "Šios naudojimo instrukcijos, išverstos į Jūsų gimtąją kalbą, galite pareikalauti atsakingoje "Cooper Crouse-Hinds/CEAG" atstovybėje savo šalyje."

LV: "Šo ekspluatācijas instrukciju valsts valodā varat pieprasīt jūsu valsts atbildīgajā Cooper Crouse-Hinds/CEAG pārstāvniecībā."

M: "Jistghu jitolbu dan il-manwal fil-lingwa nazzjonali taghhom minghand ir-rappreżentant ta' Cooper Crouse Hinds/CEAG f'pajjiżhom."

NL: "Indien noodzakelijk kan de vertaling van deze gebruiksinstructie in een andere EU-taal worden opgevraagd bij Uw Cooper Crouse-Hinds/CEAG - vertegenwoordiging"

P: "Se for necessária a tradução destas instruções de operação para outro idioma da União Europeia, pode solicita-la junto do seu representante Cooper Crouse-Hinds/CEAG"

PL: "Niniejszą instrukcję obsługi w odpowiedniej wersji językowej można zamówić w przedstawicielstwie firmy Cooper-Crouse-Hinds/CEAG na dany kraj."

S: "En översättning av denna montage- och skötselinstruktion till annat EU - språk kan vid behov beställas från Er Cooper Crouse-Hinds/CEAG- representant"

SK: "Tento návod na obsluhu Vám vo Vašom rodnom jazyku poskytne zastúpenie spoločnosti Cooper Crouse-Hinds/CEAG vo Vašej krajine."

SLO: "Navodila za uporabo v Vašem jeziku lahko zahtevate pri pristojnem zastopništvu podjetja Cooper Crouse-Hinds/CEAG v Vaši državi."

RUS: "При необходимости, вы можете запрашивать перевод данного руководства на другом языке ЕС или на русском от вашего Cooper Crouse-Хиндс / CEAG - представителяй."

GHG 960 7001 P0001 D/GB/F (s)

EAT•N

Powering Business Worldwide



Kabel- und Leitungseinführungen,
Verschlussstopfen,
Schraubverschlüsse, Trompeten-
verschraubungen, Reduzierungen
und Entwässerungsstopfen

Cable entries, blanking plugs,
screw plugs, trumpet-shaped cab-
le glands, reducing glands
and drain plugs

Entrées de câble, bouchons filetés,
bouchons de fermeture, presses-
étoupes à trompette, bagues de
réduction et bouchons de purge

Inhaltsverzeichnis:

1	Technische Daten	3
2	Legende.....	9
2.1	Sicherheitshinweise	9
3	Normenkonformität	9
4	Verwendungsbereich.....	9
5	Verwendung / Eigenschaften	9
6	Installation.....	10
6.1	Montage.....	10
6.2	Inbetriebnahme	12
7	Instandhaltung / Wartung.....	12
8	Reparatur / Instandsetzung / Änderung.....	12
9	Entsorgung / Wiederverwertung	12

Konformitätserklärung
separat beigelegt.

Contents:

1	Technical data	13
2	Legend	19
2.1	Safety instructions.....	19
3	Conformity with standards	19
4	Field of application.....	19
5	Application / Properties	19
6	Installation.....	20
6.1	Mounting	20
6.2	Putting into operation	22
7	Maintenance / Servicing	22
8	Repairs / Modifications	22
9	Disposal / Recycling.....	22

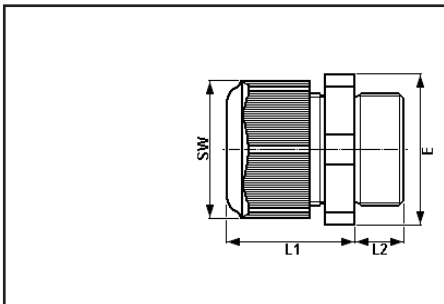
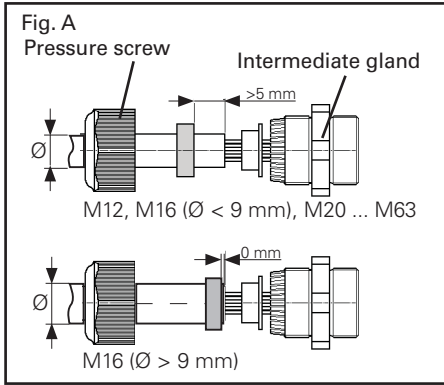
Declaration of conformity,
enclosed separately.

Contenu:

1	Caractéristiques techniques	23
2	Légende.....	29
2.1	Consignes de sécurité	29
3	Conformité aux normes	29
4	Domaine d'utilisation.....	29
5	Utilisation / Propriétés	29
6	Installation.....	30
6.1	Montage.....	30
6.2	Mise en service	32
7	Maintien/Entretien	32
8	Réparations / Remise en état.....	32
9	Évacuation des déchets / Recyclage	32

Déclaration de conformité,
jointe séparément.

Dimension drawings and dimensions in mm



1 Technical data

1.1 Technical details for: Cable entries (KLE) M12x1,5 to M63x1,5

ATEX type examination certificate:	PTB 14 ATEX 1015 X ^(A)
Marking acc. to 2014/34/EU and standard:	EN 60079-0
	⊕ II 2 G Ex e IIC Gb
	⊕ II 2 D Ex tb IIIC Db
IECEx type examination certificate:	IECEx PTB 14.0027X ^(A)
Category of application:	IEC60079-0
	Ex e IIC Gb
	Ex tb IIIC Db

^(A) The EC-Type Examination Certificate and any future supplements thereto shall, at the same time, be regarded as supplements to the EC-Type Examination Certificates PTB 99 ATEX 3128 X and PTB 99 ATEX 3101 X

Perm. storage temperature in original packing:	-20° C to +70° C
Degree of protection to IEC/EN 60529:	IP 66* ⁽¹⁾ (when fully assembled)

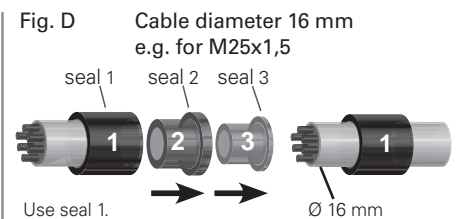
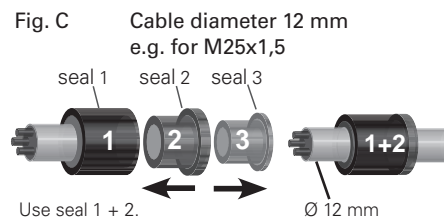
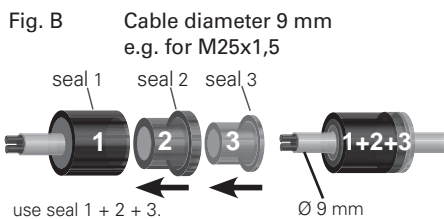
*⁽¹⁾ M40, M50 und M63 with suitable flange seal

Type	SW	L1	L2	E	weight app.
M12x1,5	15 mm	19,3 mm	12 / 8 mm	16,2 mm	3,4 g
M16x1,5	20 mm	23,0 mm	12 / 8 mm	22,0 mm	6,5 g
M20x1,5	24 mm	25,0 mm	13 / 8 mm	26,5 mm	10,1 g
M25x1,5	29 mm	29,5 mm	13 / 8 mm	32,0 mm	16,9 g
M32x1,5	36 mm	35,5 mm	15 / 10 mm	40,0 mm	27,6 g
M40x1,5	46 mm	39,5 mm	15 / 10 mm	50,5 mm	50,3 g
M50x1,5	55 mm	44,0 mm	16 / 12 mm	60,0 mm	75,9 g
M63x1,5	68 mm	47,0 mm	16 / 12 mm	75,0 mm	117,6 g

Type	operating temperature	impact resistance	Cable diameter											Screw-in thread in enclosure	Colour of dust protection cover	
			Seal 1+2+3 ⁽¹⁾⁽²⁾⁽³⁾						Seal 1+2 ⁽¹⁾⁽²⁾				Seal 1 ⁽¹⁾			
			min.		max.		min.		max.		min.	max.	min.			max.
	°C	Joule	∅	Nm**	∅ ⁽¹⁾⁽²⁾	Nm**	∅	Nm**	∅ ⁽¹⁾⁽²⁾	Nm**	∅	Nm**	∅ ⁽²⁾	Nm**	Nm**	
M12x1,5	-20 - 70	4									5,0	0,8	7,0	1,0	1,2	white
M16x1,5	-20 - 70	4					5,5	1,0	7,0	1,0	7,0	1,0	10,0	1,4	3,3	white
M20x1,5	-20 - 70	7	5,5	1,5	7,0	1,0	7,0	1,5	9,0	1,4	9,5	1,0	13,0	1,7	2,7	white
M20x1,5	-40 - 70	4	5,5	1,5	7,0	1,0	7,0	1,5	9,0	1,4	9,5	1,0	11,0	1,7	2,7	green
M25x1,5	-20 - 70	7	8,0	1,5	10,0	2,0	10,0	2,3	13,0	2,6	13,5	1,3	17,5	2,3	3,0	white
M25x1,5	-55 - 70	7	8,0	1,5	10,0	2,0	10,0	2,3	13,0	2,6	13,5	1,5	15,0	2,3	3,0	green
M32x1,5	-20 - 70	7					14,0	3,0	17,0	4,0	17,5	1,5	21,0	1,3	5,0	white
M32x1,5	-55 - 70	7					14,0	3,0	17,0	4,0	17,5	1,5	21,0	1,3	5,0	green
M40x1,5	-55 - 70	7					19,0	3,3	22,0	5,5	22,0	3,3	28,0	6,7	7,5	green
M50x1,5	-55 - 70	7					24,0	6,0	28,0	7,0	28,0	5,0	35,0	7,0	7,5	green
M63x1,5	-55 - 70	7					29,0	12,0	35,0	12,0	36,0	12,0	41,0	13,0	7,5	green
additional seal							41,0	13,0	48,0	7,8						

** Test torques at 20°C

⁽¹⁾ The tests of clamping ranges and torque values were performed with metal mandrel. The clamping range can vary by using cables with different manufacturing tolerances and material properties. Please use the combination of sealing 1 + 2 + 3 for the intermediate region.
⁽²⁾ When selecting the seal rubber, ensure that the cap nut can be tightened when carrying out any future maintenance work on the cable entry.



Cable entries, blanking plugs, screw plugs, trumpet-shaped cable glands, reducing glands and drain plugs

Dimension drawings and dimensions in mm

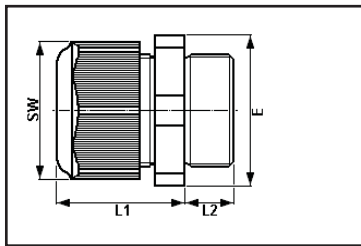
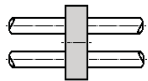


Fig. D/1 Seal insert



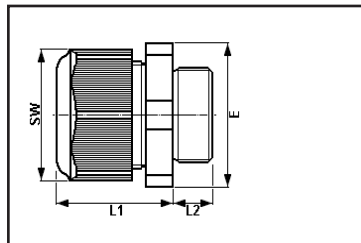
for multiple gland

1.2 Multiple glands

Type	SW	L1	L2	E	weight app.
M25x1,5 2- times	29 mm	29,5 mm	13 / 8 mm	32,0 mm	16,9 g
M32x1,5 4- times	36 mm	35,5 mm	15 / 10 mm	40,0 mm	27,6 g

Type	Operating temperature	Impact resistant	Cable diameter			
			Seal 1			
			min.		max.	
	°C	Joule	Ø	Nm	Ø	Nm
M25x1,5 2- times	-20 - 70	< 7	2x 4,5	2,0	7,0	2,0
M32x1,5 4- times	-20 - 70	< 7	4x 4,5	3,0	7,0	3,5

1.3 Enlargement glands



Type	SW	L1	L2	E	weight app.
M16x1,5 / M20x1,5	24 mm	25,0 mm	12 mm	26,5 mm	9,2 g
M20x1,5 / M25x1,5	29 mm	29,5 mm	13 mm	32,0 mm	16,7 g
M25x1,5 / M32x1,5	36 mm	35,5 mm	15 mm	40,0 mm	27,0 g
M32x1,5 / M40x1,5	46 mm	39,5 mm	15 mm	50,5 mm	46,5 g
M40x1,5 / M50x1,5	55 mm	44,0 mm	15 mm	60,0 mm	73,5 g
M50x1,5 / M63x1,5	68 mm	47,0 mm	16 mm	75,0 mm	106,4 g

Type	Operating temperature	Impact resistant	Cable diameter												Screw-in thread in enclosure
			Seal 1+2+3 1 2 3						Seal 1+2 1 2				Seal 1 1		
			min.		max.		min.		max.		min.		max.		
°C	Joule	Ø	Nm**	Ø ⁽¹⁾⁽²⁾	Nm**	Ø	Nm**	Ø ⁽¹⁾⁽²⁾	Nm**	Ø	Nm**	Ø ⁽¹⁾	Nm**	Nm**	
M16x1,5 / M20x1,5	-20 - 70	< 7	5,5	1,5	7,0	1,0	7,0	1,5	9,0	1,4	9,5	1,0	13,0	1,7	3,3
	-40 - 70	< 4	5,5	1,5	7,0	1,0	7,0	1,5	9,0	1,4	9,5	1,0	11,0	1,7	3,3
M20x1,5 / M25x1,5	-20 - 70	< 7	8,0	1,5	10,0	2,0	10,0	2,3	13,0	2,6	13,5	1,3	17,5	2,3	2,7
	-40 - 70	< 4	8,0	1,5	10,0	2,0	10,0	2,3	13,0	2,6	13,5	1,5	15,0	2,3	2,7
M25x1,5 / M32x1,5	-55 - 70	< 7					14,0	3,0	17,0	4,0	17,5	1,5	21,0	1,3	3,0
M32x1,5 / M40x1,5	-55 - 70	< 7					19,0	3,3	22,0	5,5	22,0	3,3	28,0	6,7	5,0
M40x1,5 / M50x1,5	-55 - 70	< 7					24,0	6,0	28,0	7,0	28,0	5,0	35,0	7,0	7,5
M50x1,5 / M63x1,5	-55 - 70	< 7					29,0	12,0	35,0	12	36,0	12,0	41,0	13,0	7,5
additional seal							41,0	13,0	48,0	7,8					

** Test torques at 20°C

(1) The tests of clamping ranges and torque values were performed with metal mandrel. The clamping range can vary by using cables with different manufacturing tolerances and material properties. Please use the combination of sealing 1 + 2 + 3 for the intermediate region.

(2) When selecting the seal rubber, ensure that the cap nut can be tightened when carrying out any future maintenance work on the cable entry.

Dimension drawings and dimensions in mm

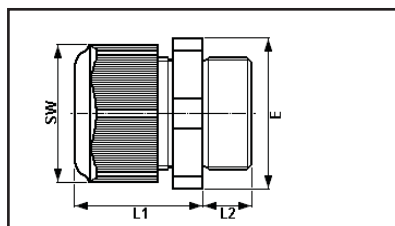
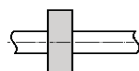


Fig. D/2 Seal insert



for gland for flat cables

1.4 Cable entries in special versions

Type	SW	L1	L2	E	weight app.
M20 with seal Ø 2 mm	24 mm	25,0 mm	13 / 8 mm	26,5 mm	10,1 g
M20 with slotted seal Ø 7,0- 13 mm	24 mm	25,0 mm	13 / 8 mm	26,5 mm	10,1 g
M25 flat cable	29 mm	29,5 mm	13 / 8 mm	32,0 mm	16,9 g
M25 with PG 16 thread	36 mm	35,5 mm	15 / 10 mm	40,0 mm	27,6 g

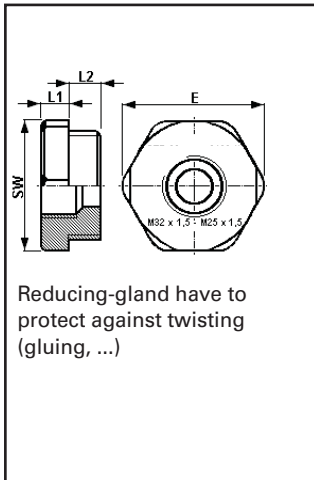
Type	Operating temperature	Impact resistant	Cable-diameter								Screw-in thread in enclosure
			Seal 1+2				Seal 2				
	°C	Joule	min. Ø	max. Nm**	min. Ø ⁽¹⁾⁽²⁾	max. Nm**	min. Ø	max. Nm**	min. Ø ⁽¹⁾⁽²⁾	max. Nm**	
M20 with seal Ø 2 mm	-20 - 60	< 7	2,0	3,5						2,7	
M20x1,5 with slotted seal Ø 7,0- 13 mm	-5 - 45		Breakout-Innenkabel Typ: orange								2,7
	-20 - 60		Ultra-Fox Plus Typ: 903 AG 621 02 709								2,7
	-20 - 60		Ehret / ICS 24 Typ: 84 305								2,7
M25x1,5 with PG 16 thread	-20 - 70	< 7	10,0	2,3	13,0	2,6	13,5	1,3	17,5	2,3	3,0
	-55 - 70	< 7	10,0	2,3	13,0	2,6	13,5	1,5	15,0	2,3	3,0
M25x1,5 flat cable	-55 - 70 (110)	< 7	G18 = 5-8x9-12,5 Flachkabel			5,0					3,0
M25x1,5 flat cable	-55 - 70 (110)	< 7	G24 / G26 = 6-8x11-14 Flachkabel			3,5					3,0
	Cable type		Seal dimensions				Cable dimensions				
M25 flat cable	Raychem XTV-4XTV 2 ...		8,0	x	11,0	mm	7,5	x	11,0	mm	3,0
M25 flat cable	Raychem VPL-5VPL 2 ...		8,0	x	11,0	mm	7,5	x	11,5	mm	3,0
M25 flat cable	Raychem BTV-3BTV 2 ...		8,0	x	11,0	mm	6,0	x	11,0	mm	3,0
M25 flat cable	Raychem QTV-10QTVR2		8,0	x	11,0	mm	5,0	x	12,5	mm	3,0
M25 flat cable Raychem	Raychem BTV-10BTV 2 ...		8,0	x	14,0	mm	6,0	x	14,0	mm	3,0
M25 flat cable	Raychem KTV-5KTV 2 ...		8,0	x	14,0	mm	7,5	x	13,5	mm	3,0

** Test torques at 20°C

(1) The tests of clamping ranges and torque values were performed with metal mandrel. The clamping range can vary by using cables with different manufacturing tolerances and material properties. Please use the combination of sealing 1 + 2 for the intermediate region.

(2) When selecting the seal rubber, ensure that the cap nut can be tightened when carrying out any future maintenance work on the cable entry.

Dimension drawings and dimensions in mm

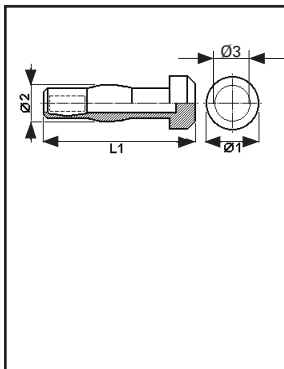


1.5 Reducing glands

Type	Operating temperature / °C	SW	L1	L2	E	Screw-in thread in enclosure / Nm	weight app.
M16x1,5 / M12x1,5	-55 - 70					3,3 Nm	
M20x1,5 / M12x1,5	-55 - 70	24 mm	6,0 mm	8 mm	26,5 mm	2,7 Nm	9,0 g
M20x1,5 / M16x1,5	-55 - 70	24 mm	6,0 mm	8 mm	26,5 mm	2,7 Nm	9,0 g
M25x1,5 / M12x1,5	-55 - 70	29 mm	6,0 mm	8 mm	32,0 mm	3,0 Nm	12,5 g
M25x1,5 / M16x1,5	-55 - 70	29 mm	6,0 mm	8 mm	32,0 mm	3,0 Nm	12,5 g
M25x1,5 / M20x1,5	-55 - 70	29 mm	6,0 mm	8 mm	32,0 mm	3,0 Nm	12,5 g
M32x1,5 / M12x1,5	-55 - 70	36 mm	6,0 mm	10 mm	40,0 mm	5,0 Nm	13,5 g
M32x1,5 / M16x1,5	-55 - 70	36 mm	6,0 mm	10 mm	40,0 mm	5,0 Nm	13,5 g
M32x1,5 / M20x1,5	-55 - 70	36 mm	6,0 mm	10 mm	40,0 mm	5,0 Nm	13,5 g
M32x1,5 / M25x1,5	-55 - 70	36 mm	6,0 mm	10 mm	40,0 mm	5,0 Nm	13,0 g
M40x1,5 / M16x1,5	-55 - 70	46 mm	6,0 mm	10 mm	50,5 mm	7,5 Nm	21,0 g
M40x1,5 / M20x1,5	-55 - 70	46 mm	6,0 mm	10 mm	50,5 mm	7,5 Nm	21,0 g
M40x1,5 / M25x1,5	-55 - 70	46 mm	6,0 mm	10 mm	50,5 mm	7,5 Nm	23,0 g
M40x1,5 / M32x1,5	-55 - 70	46 mm	6,0 mm	10 mm	50,5 mm	7,5 Nm	21,0 g
M50x1,5 / M20x1,5	-55 - 70	55 mm	6,0 mm	12 mm	60,0 mm	7,5 Nm	72,0 g
M50x1,5 / M25x1,5	-55 - 70	55 mm	6,0 mm	12 mm	60,0 mm	7,5 Nm	72,0 g
M50x1,5 / M32x1,5	-55 - 70	55 mm	6,0 mm	12 mm	60,0 mm	7,5 Nm	72,0 g
M50x1,5 / M40x1,5	-55 - 70	55 mm	6,0 mm	12 mm	60,0 mm	7,5 Nm	65,0 g
M63x1,5 / M25x1,5	-55 - 70	68 mm	6,0 mm	12 mm	75,0 mm	7,5 Nm	40,0 g
M63x1,5 / M32x1,5	-55 - 70	68 mm	6,0 mm	12 mm	75,0 mm	7,5 Nm	40,0 g
M63x1,5 / M40x1,5	-55 - 70	68 mm	6,0 mm	12 mm	75,0 mm	7,5 Nm	40,0 g
M63x1,5 / M50x1,5	-55 - 70	68 mm	6,0 mm	12 mm	75,0 mm	7,5 Nm	30,0 g

L1 = Screw-in thread in enclosure
L2 = Reducing thread

1.6 Blanking plug for multiple glands

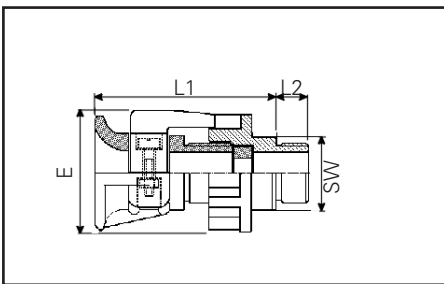


Type	Operating temperature / °C	Ø 1	Ø 2	L1	Ø 3	weight app.
M12x1,5*	-55 / +70	7,0 mm	6,0 mm	30,3 mm	5,0 mm	1,0 g
M16x1,5	-55 / +70	8,0 mm	7,0 mm	33,0 mm	6,0 mm	1,3 g
M20x1,5	-55 / +70	12,0 mm	8,5 mm	34,5 mm	7,0 mm	6,6 g
M25x1,5	-55 / +70	16,0 mm	11,0 mm	36,0 mm	10,0 mm	2,8 g
M32x1,5	-55 / +70	20,0 mm	14,0 mm	39,5 mm	13,0 mm	4,6 g
M40x1,5	-55 / +70	24,0 mm	20,0 mm	42,0 mm	19,0 mm	7,0 g
M50x1,5	-55 / +70	32,0 mm	26,0 mm	44,0 mm	25,0 mm	8,0 g
M63x1,5	-55 / +70	39,0 mm	34,0 mm	45,0 mm	32,0 mm	9,0 g

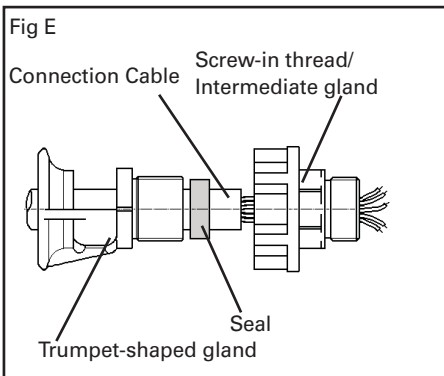
* for multiple glands M25x1,5 and M32x1,5

Dimension drawings and dimensions in mm **1.7 Trumpet-shaped glands M20 to M63**

ATEX type examination certificate:	PTB 00 ATEX 3121	
Marking acc. to 2014/34/EU and standard:	EN 60079-0	
	⊕ II 2 G Ex e II	⊕ II 2 D Ex tD A21 IP66
IECEX type examination certificate:	IECEX BK1 08.0007	
Category of application:	IEC60079-0	
	Ex e II	Ex tD A21 T85°C IP66
Perm. storage temperature in original packing:	-20° C +40° C	
Degree of protection to IEC/EN 60529:	IP 66 (fully assembled)	

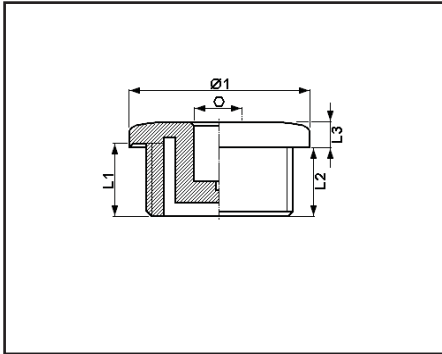


Type	SW	L1	L2	E width across corners	weight app.
M20x1.5	27 mm	64 mm	15 mm	47 mm	57 g
M25x1.5	32 mm	65 mm	15 mm	51 mm	68 g
M32x1.5	41 mm	80 mm	15 mm	68 mm	138 g
M40x1.5	50 mm	86 mm	15 mm	81 mm	191 g
M50x1.5	60 mm	95 mm	16 mm	96 mm	325 g
M63x1.5	75 mm	105 mm	16 mm	107 mm	757 g



Type	Operating temperature °C	Impact re-sistant Joule	Cable diameter		strain Relief (screws)		Screw-in thread Nm
			min. Ø	max. Ø	Nm	Nm	
			Trumpet-shaped gland				
			min. Ø	max. Ø	Nm	Nm	Nm
M20x1,5	-40 - 85	< 7	8,0	13,0	3,0	1,5	3,5
M25x1,5	-40 - 85	< 7	11,0	16,0	3,0	2,0	4,0
M32x1,5	-40 - 85	< 7	15,0	20,0	6,0	4,0	7,5
M40x1,5	-40 - 85	< 7	19,0	27,0	10,0	6,0	12,0
M50x1,5	-40 - 85	< 7	26,0	34,0	30,0	10,0	35,0
M63x1,5	-40 - 85	< 7	35,0	46,0	40,0	15,0	45,0

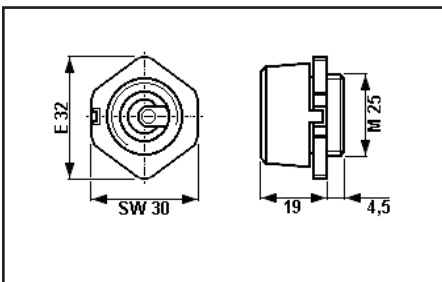
Dimension drawings and dimensions in mm

1.8 Screw plugs

ATEX type examination certificate:	PTB 98 ATEX 3130	
Marking acc. to 2014/34/EU and standard:	EN 60079-0	
	⊕ II 2 G Ex IIC Gb	
	⊕ II 2 D Ex tb IIIC Db IP66 (not for M63x1,5)	
IECEX type examination certificate::	IECEX PTB 03.0000	
Category of application:	IEC60079-0	
	Ex IIC Gb	(not for M63x1,5)
	Ex tb IIIC Db IP 66	(not for M63x1,5)
Perm. storage temperature in original packing:	-20° C +40° C	
Degree of protection to IEC/EN 60529:	(fully assembled)	
	M12- M50	IP 66
	M63	IP 54

Type	Operating temperature / °C	Ø 1	L1	L2	L3	Screw-in thread in enclosure / Nm	weight app.
M16x1,5	-55 / +95	21 mm	12 mm	11 mm	4,0 mm	3,3	2,4 g
M20x1,5	-55 / +95	25 mm	13 mm	12 mm	4,0 mm	2,7	4,3 g
M25x1,5	-55 / +95	30 mm	13 mm	12 mm	4,0 mm	3,0	6,6 g
M32x1,5	-55 / +95	37 mm	15 mm	14 mm	5,5 mm	5,0	12,0 g
M40x1,5	-55 / +95	45 mm	15 mm	14 mm	5,5 mm	7,5	36,6 g
M50x1,5	-55 / +95	55 mm	16 mm	15 mm	5,5 mm	7,5	56,6 g
M63x1,5	-20 / +80	72 mm	/mm	12 mm	11,0 mm	7,5	64,5 g

⊕ = Socket head spanner or screw driver, size 8 mm

1.9 Drain plug

ATEX type examination certificate:	PTB 01 ATEX 1128 X	
Marking acc. to 2014/34/EU and standard:	EN 60079-0	
	⊕ II 2 G Ex e II	
Permissible operating temperature range:	-20° C +40° C	
Perm. storage temperature in original packing:	-20° C +40° C	
Degree of protection to IEC/EN 60529:	IP 66 (fully assembled)	
Screw-in thread in enclosure:	M25x1,5	
Test torque:	5,0 Nm	

2 Legend

Caution

This symbol warns of a possible failure. Failure to observe this caution may result in the total failure of the device or the system or plant to which it is connected.



Special conditions:

This symbol indicates that special conditions apply for a safe operation in accordance with the EC Type Examination Certificate / IECEx Certificate of Conformity.

2.1 Safety instructions



The operations must be carried out by electrical suitably trained in hazardous area with knowledge of increased safety explosion protection IEC/EN 60079-14.

All the entries and components listed in these operating and mounting instructions are not suited for use in Zone 0 and Zone 20.

In addition, they may not be used as direct cable entries or seals for flameproof enclosures in potentially explosive atmospheres in Zone 1, Zone 2 and Zone 21, Zone 22.

They shall be used for their intended purpose and shall be in a perfect and clean state.

Prior to mounting, check the entries and components, as well as the screw-in threads of the apparatus into which they are to be mounted to ensure that they are in a perfect state.

The requirements of the IEC/EN 60079-0 and EN/IEC 60079-31 regarding excessive dust deposits and temperature to be considered from the user.

The national safety rules and regulations for the prevention of accidents, as well as the safety instructions included in these operating instructions, that, like this text, are set in italics, shall be observed!

3 Conformity with standards

They have been designed, manufactured and tested according to the state of the art and to DIN EN ISO 9001 and EN ISO/IEC 80079-34.

The apparatus are conform to the standards specified in the EC-Declaration of conformity, enclosed separately.

References to standards and directives in these operating instructions always relate to the latest version. Other additions (e.g. details relating to the year) shall be observed.

4 Field of application

The entries and components covered by these instructions (see Technical Data) are suited for mounting in potentially explosive atmospheres in Zone 1, Zone 2 and Zone 21, Zone 22 accordance with IEC/EN 60079-10-1 and IEC/EC 60079-10-2!

The materials used, including the exterior metal parts, are high quality materials that ensure a corrosion resistance and resistance to chemical substances according to the requirements for use in a "normal industrial atmosphere":


- impact resistant polyamide
- stainless steel

In case of use in an extremely aggressive atmosphere, please refer to manufacturer

5 Application / Properties

All the cable entries and components covered by these operating and mounting instructions are suited for use in enclosures and apparatus in the type of protection "Increased Safety".

Trumpet-shaped cable glands are used for feeding flexible cables into enclosures and apparatus.


 The fitting of seal inserts one inside the other or the interchanging of seal inserts of different entries to reduce the cable opening is not permitted.

Reducing glands can be used to reduce the size of threaded or through holes in enclosures to a smaller thread size.


Blanking plugs are used to seal metric COOPER CROUSE-HINDS cable entries and COOPER CROUSE-HINDS multiple entries.


Screw glands are used to seal unused through and threaded holes.

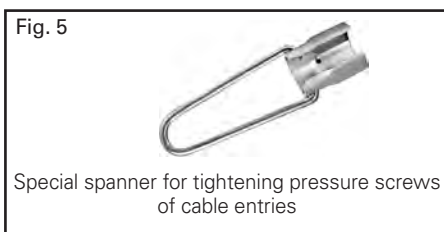
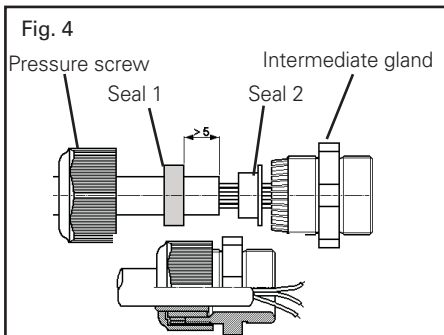
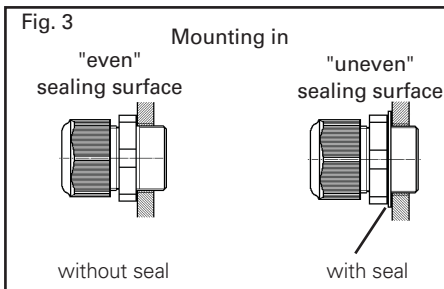
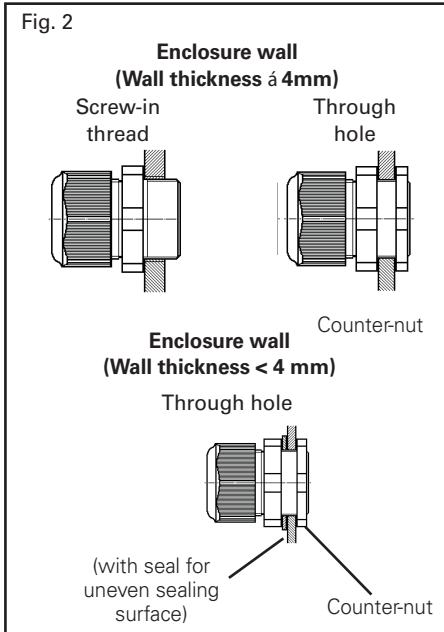
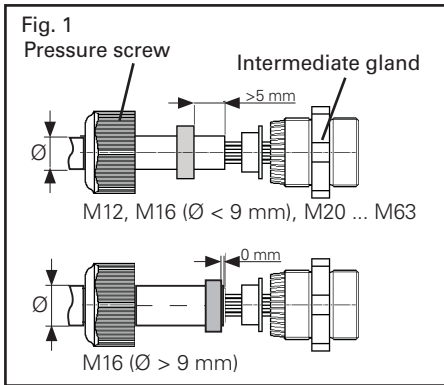
Any condensation in the apparatus can escape via drain plugs (see 6.1, Mounting).

 Applications other than those described are not permissible without a written declaration of consent from Messrs. COOPER CROUSE-HINDS.

 The instructions according to section 7 of the operating instructions shall be observed during operation.

 The sole responsibility with respect to the suitability and proper use of these entry components with regard to the basic conditions of these instructions (see Technical Data) lies with the operator.

 The EC-Type Examination Certificate and any future supplements thereto shall, at the same time, be regarded as supplements to the EC-Type Examination Certificates PTB 99 ATEX 3128 X and PTB 99 ATEX 3101 X.



6 Installation

The relevant national regulations and the generally recognized rules of engineering apply for the installation and operation. (IEC/EN 60079-14).

⚠ The improper installation and operation of enclosures can result in the invalidation of the guarantee.

⚠ Observe the special operational conditions accordance to IEC/EN 60069-14.

⚠ Only fixed cables may be used. The operator shall ensure that an appropriate strain relief is provided. This is not required for trumpet-shaped glands.

⚠ The degree of protection IP66 is only attained if the seals and cable entries are installed correctly.

⚠ Cable entries that are only suited for a low impact energy shall be built into an enclosure in such a way as to protect them from a mechanical impact energy.

6.1 Mounting

⚠ Prior to mounting, ensure that the threads of the entry components match the threads of the apparatus or enclosure.

⚠ If the entries and components are to be screwed directly into the walls, the wall thickness of the apparatus shall be at least 4 mm.

⚠ Counter-nuts shall be used if enclosure walls are less than 4 mm thick. The minimum thickness of the enclosure wall shall be 1.5 mm.

⚠ The use of entry elements with damaged or dirty threads can impair the IP degree of protection.

⚠ Imported Cables and wiring shall be relieved of tensile forces (eg with a cable clamp).

6.1.1 Cable entries (KLE)

The intermediate gland (see Fig. 1) of the cable entries shall be fitted with a suitable tool, e.g. fork, ring or box spanner.

It is mounted directly in the threaded hole or via the through hole of the enclosure (see Fig. 2).

If the sealing surfaces are uneven, seals shall be used between the enclosure wall and the intermediate gland (see Fig. 3).

Counter-nuts shall be used for walls with a thickness of less than 4 mm (see Fig. 2).

Cables are fed in as shown in Fig. 4.

The seal inserts shall be chosen to suit the respective cable diameter (Page 13 Figs. A, B, C and D).

Use COOPER CROUSE-HINDS spanners with a side opening can be used to facilitate the tightening of the pressure screw when the cable entry has been mounted (see Fig. 5).

Order No. GHG 960 1951 R0001 for Set 1 (M12, 16, 20, 25, 32 and 40)

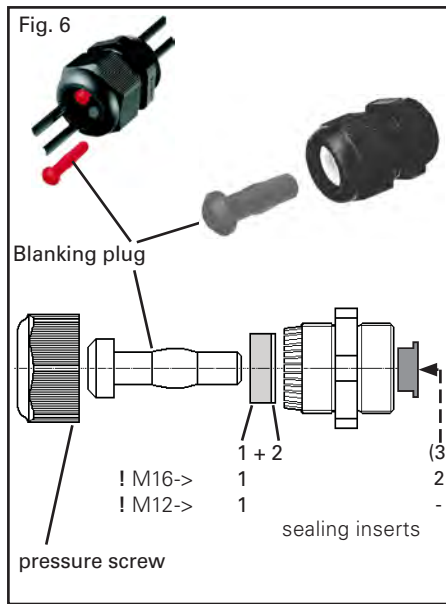
Order No. GHG 960 1951 R0002 for Set 2 (M50 and M63)

To ensure the required minimum degree of protection, the gland body and the pressure cap shall be tightened with the given test torques (see Technical Data).

When tightening the pressure cap, the gland body shall be prevented from turning with a suitable tool, e.g. a spanner.

⚠ Overtightening can impair the degree of protection.

Optionally, cable entries with colour-coded (light blue) pressure screws can be used for intrinsically safe circuits (see main COOPER CROUSE-HINDS catalogue for order numbers).

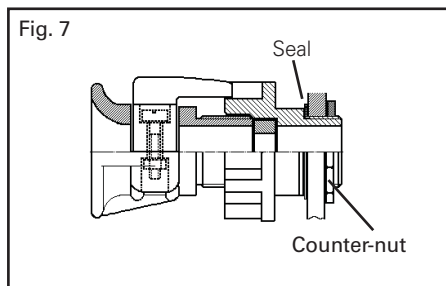


6.1.2 Blanking plugs

⚠ Blanking plugs of the types GGH 960 6107 P**** or GHG 960 1944 R**** may only be used in conjunction with cable entries of the types GHG 960 92** P**** or GHG 960 19** R****.

The following shall be observed when mounting blanking plugs for COOPER CROUSE-HINDS metric cable entries (see Fig. 6):

1. Only the blanking plug associated to the KLE shall be used.
2. When closing the gland with a blanking plug, always use sealing inserts 1+2!
3. The head of the blanking plug shall, as shown in Fig. 6, be on the outside.
4. The blanking plug shall be pushed into the KLE until it reaches the stop.
5. The pressure screw of the KLE shall be tightened down as described in 6.1.1.



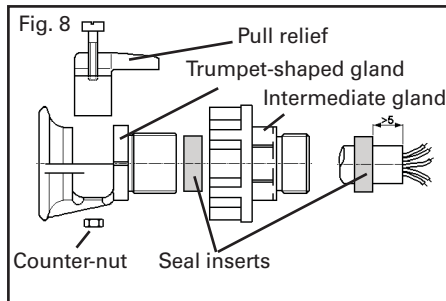
6.1.3 Screw plug

The screw plug shall be screwed tightly into the threaded hole in the enclosure using a suitable tool, e.g. 8 mm socket head spanner or a suitable screw driver.

A counter-nut shall be used for through holes or enclosures that are less than 4 mm thick.

An additional seal shall be used for uneven sealing surfaces.

⚠ In general, the M50 screw plug shall be mounted together with the seal supplied.



6.1.4 Trumpet-shaped gland

A suitable tool, e.g. a fork spanner, shall be used for mounting the intermediate gland in the trumpet-shaped gland in such a way that it cannot twist.

It is necessary to ensure that the gland cannot twist once the cable has been fed in and the trumpet-shaped gland mounted (e.g. by using a counter-nut, see Figs. 7 + 8). A counter-nut shall be used for through holes or enclosures that are less than 4 mm thick. When mounting, a seal shall always be used between the enclosure wall and intermediate gland (see Fig. 7).

The following describes the mounting of the cable in the trumpet-shaped gland, as shown in Fig. 8:

1. Cut out the individual rings of the "onion ring" seal insert to match the respective cable diameter.
2. After feeding in the cable, that has been cut to length and has the seal mounted, into the intermediate gland, screw the trumpet-shaped gland tightly into the intermediate gland to seal off the cable.
3. Then mount the pull relief on the trumpet-shaped gland.

⚠ It is necessary to ensure that there is sufficient pull relief, that damage to the cable is not possible and that the trumpet-shaped gland cannot twist.

6.1.5 Reducing gland

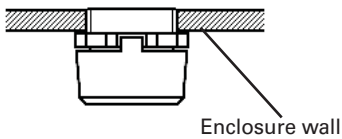
A suitable tool, e.g. a fork, ring or box spanner, shall be used for screwing the reducing gland tightly into the threaded hole in the enclosure.

A counter-nut shall be used for through holes or enclosures that are less than 4 mm thick.

An additional seal shall be used for uneven sealing surfaces.

⚠ Screwing several reducing glands one inside the other to reduce the size of the entry thread is not permitted.

Fig. 9



6.1.6 Drain plug

A suitable tool, e.g. a fork, ring or box spanner, shall be used for screwing the drain plug tightly into the threaded hole in the enclosure.

An additional seal shall be used for uneven sealing surfaces.

The drain plug shall be mounted at the lowest point of the apparatus or enclosure (see Fig. 9).

⚠ The minimum wall thickness may not be less than 4 mm.

Entry components shall be screwed in tightly to ensure the specified minimum degree of protection (see Technical Data for test torques).

⚠ Overtightening can impair the degree of protection.

6.2 Putting into operation

Prior to putting the mounted entry components into operation, the tests specified in the individual national regulations shall be performed.

In addition to this, prior to putting the entries into operation, the correct mounting shall be checked in accordance with these operating and mounting instructions and any other applicable regulations.

⚠ In locations where they are particularly at risk, the entries shall be safeguarded against being torn out of the apparatus or enclosure walls by external mechanical influences (e.g. by fork lift trucks, by knocking or similar).

7 Maintenance / Servicing

⚠ The valid national regulations for the servicing / maintenance of electrical apparatus for use in potentially explosive atmospheres shall be observed (e.g. IEC/EN 60079-17).

The necessary intervals between servicing depend upon the specific application and shall be stipulated by the operator according to the respective operating conditions.

As part of the routine testing, above all, parts on which the explosion protection depends shall be checked (e.g. intactness of entry components and seals).

Pressure screws of cable entries, trumpet-shaped glands of trumpet-shaped cable entries shall be checked at regular intervals to ensure that they are screwed in tightly and, if necessary, they shall be tightened down.

If, in the course of servicing, it is ascertained, that repairs are necessary, section 8 of these operating instructions shall be observed.

8 Repairs / Modifications

Only original COOPER CROUSE-HINDS parts shall be used for carrying out repairs that concern the explosion protection.

⚠ Repairs that affect the explosion protection may only be carried out by COOPER CROUSE-HINDS or by a qualified electrician in compliance with the respective national regulations (e.g. IEC/EN 60079-19).

Modifications to the entry components are not permitted.

9 Disposal / Recycling

The respective valid national regulations for waste disposal shall be observed when disposing of apparatus.

To facilitate recycling of individual parts, parts made of moulded plastic bear the marking for the type of plastic used.

The product range is subject to changes and additions.



IPC

MANUALE D'USO E MANUTENZIONE

SISTEMI DI ASPIRAZIONE INDUSTRIALE
A DISSIPAZIONE STATICA / CON MESSA A TERRA
ALIMENTAZIONE ELETTRICA
PER RECUPERO DI MATERIALE SECCO

MODEL: PLANET 22 S ATEX

POLVERE CLASSE "H"

CE  II 3 D

Ex h tc IIIC T200°C Dc IP6X

IP Cleaning S.r.l.
via E.Fermi,2
CASTELVERDE (CR) - ITALY
<http://www.ipcworldwide.com>

**LEGGERE INTEGRALMENTE IL PRESENTE MANUALE DI
ISTRUZIONI PRIMA DI PROCEDERE ALL'UTILIZZO, ALLA
PULIZIA ED ALLA MANUTENZIONE
IMPORTANTE – CONSERVARE IL PRESENTE MANUALE
ISTRUZIONI**

INDICE

1.0	ISPEZIONE DELLA MACCHINA.....	3
2.0	APPLICAZIONI	3
3.0	IMPORTANTI PRECAUZIONI DI SICUREZZA	5
3.1.	SPIA DI AVVISO FILTRO BLOCCATO	6
3.2.	STRATI DI POLVERE.....	6
3.3.	LIMITAZIONI DI TEMPERATURA.....	6
3.4.	MATERIALE BRUCIANTE	7
3.5.	LIQUIDI INFIAMMABILI	7
3.6.	POLVERI CONDUTTIVE E DI METALLO	7
3.7.	AUTO-INNESCO DELLA POLVERE	7
3.8.	SCINTILLE GENERATE MECCANICAMENTE	ERROR! BOOKMARK NOT DEFINED.
3.9.	INDICAZIONI SPECIALI PER UN UTILIZZO SICURO RIGUARDO LA GENERAZIONE DI CARICHE ELETTROSTATICHE	7
4.0	ISTRUZIONI PRELIMINARI E ISTRUZIONI DI SICUREZZA IMPORTANTI	8
5.0	PRECAUZIONI PER IL RECUPERO DI MATERIALI PERICOLOSI	10
6.0	ISTRUZIONI PER LA MESSA A TERRA	11
7.0	VERIFICA DELLA CONTINUITA' DI TERRA.....	12
8.0	SISTEMA FILTRANTE	13
9.0	ISTRUZIONI PER IL RECUPERO DI MATERIALE SECCO.....	14
10.0	PULIZIA E MANUTENZIONE	15
11.0	MONTAGGIO E SOSTITUZIONE FILTRO HEPA	16
11.1.	SOSTITUZIONE FILTRO HEPA ARIA INGRESSO RAFFR MOTORE	17
11.2.	SOSTITUZIONE FILTRO HEPA ARIA IN USCITA RAFFR MOTORE	17
11.3.	SOSTITUZIONE FILTRO HEPA ARIA AMBIENTE IN USCITA.....	18
11.4.	SOSTITUZIONE FILTRO HEPA ARIA AMBIENTE IN INGRESSO	18
12.0	DEPOSITO	19
13.0	SPECIFICHE TECNICHE.....	19
14.0	RISOLUZIONE DEI PROBLEMI:	20
15.0	ALLEGATI.....	20
16.0	DICHIARAZIONE DI CONFORMITA' CE	21

1.0 ISPEZIONE DELLA MACCHINA

Al ricevimento dell'Aspiratore, disimballare con cautela ed ispezionare attentamente l'apparecchio per individuare eventuali danni subiti durante il trasporto. Ciascun aspiratore viene collaudato e accuratamente ispezionato prima della spedizione, pertanto, eventuali danni saranno da imputarsi al trasportatore che dovrà esserne tempestivamente informato.

2.0 APPLICAZIONI

ATTENZIONE: Le normative vigenti non disciplinano in maniera specifica il recupero di polveri combustibili in aree pericolose. Per il recupero di polveri combustibili deve essere effettuata una valutazione del rischio da parte dell'utilizzatore. Le raccomandazioni in questo manuale non possono, in nessun caso, sofferire alle conclusioni di una valutazione del rischio.

La serie PLANET 22 S ATEX sono aspiratori industriali a dissipazione statica / con messa a terra ad alimentazione elettrica, per l'utilizzo in atmosfere esplosive classificate ATEX Zona 22 per Polvere.

L'aspiratore industriale PLANET 22 S ATEX è certificato nel rispetto della Direttiva 2014/34/EU per Gruppo II e Categoria 3. L'aspiratore è fornito della seguente marcatura:

  II 3 D
Ex h tc IIIC T200°C Dc IP6X

Per questi apparecchi è stato istituito un controllo interno di produzione in accordo con la Direttiva 2014/34/EU. Gli esami ed i test sono registrati in un report confidenziale.

ATTENZIONE: **QUESTO ASPIRATORE NON E' PROGETTATO PER L'UTILIZZO IN ZONE PERICOLOSE CLASSIFICATE 20 O 21. NON UTILIZZARE L'ASPIRATORE IN ZONA PERICOLOSE CLASSIFICATE 20 O 21.**

ATTENZIONE: Questo aspiratore è progettato per il recupero di materiale secco. Non recuperare liquidi.

ATTENZIONE: Utilizzare solo attrezzi ed accessori forniti dal produttore. L'uso di altri attrezzi ed accessori può compromettere la sicurezza.

2.1. APPLICAZIONI IN ATMOSFERE POTENZIALMENTE ESPLOSIVE IN PRESENZA DI GAS, VAPORI O LIQUIDI INFIAMMABILI

ATTENZIONE: QUESTO ASPIRATORE NON E' PROGETTATO PER L'UTILIZZO IN AREE PERICOLOSE CONTENENTI GAS, VAPORI O LIQUIDI INFIAMMABILI. **NON UTILIZZARE L'ASPIRATORE IN AREE PERICOLOSE CONTENENTI GAS, VAPORI O LIQUIDI INFIAMMABILI.**

2.2. APPLICAZIONI IN ATMOSFERE POTENZIALMENTE ESPLOSIVE IN PRESENZA DI POLVERI COMBUSTIBILI.

La serie PLANET 22 S ATEX è costituita di aspiratori elettrici, a dissipazione statica / con messa a terra progettati e certificati per l'utilizzo in aree classificate **ATEX Zona 22**, in cui durante le normali attività non è probabile la formazione di un'atmosfera esplosiva sotto forma di nube di polvere combustibile o, qualora questa si verifici, sia unicamente di breve durata.

Il modello PLANET 22 S ATEX **può essere utilizzato per recuperare polveri combustibili quali:**

- Polveri Combustibili volanti
- Polveri combustibili di carbone (nerofumo, carbone, polveri di carbone o coke)
- Farina, grano, legno, plastica e polveri chimiche
- Un massimo di 2 Kg (5 libbre)** di polveri conduttive o polveri di metallo

ATTENZIONE: Per il recupero di più di 2 Kg (5 libbre) di polveri conduttive o polveri di metallo raccomandiamo di utilizzare un separatore ad immersione opzionale "wet mix" per recuperare la polvere in un bagno di liquido.

ATTENZIONE: NON RECUPERARE BRACI O POLVERI ACCESE.

3.0 IMPORTANTI PRECAUZIONI DI SICUREZZA

3.1. INGRESSO ARIA RAFFREDDAMENTO DEL MOTORE

ATTENZIONE: **NON AVVOLGERE IL CAVO DI ALIMENTAZIONE INTORNO ALL'INGRESSO ARIA PER IL RAFFREDDAMENTO DEL MOTORE E NON OSTRUIRE L'INGRESSO ARIA RAFFREDDAMENTO MOTORE IN ALCUN MODO DURANTE L'UTILIZZO. CIO' PREVIENE CHE LA TEMPERATURA DEL MOTORE CRESCA E QUINDI LO SPEGNIMENTO DELL'ASPIRATORE.**



Durante il funzionamento,
l'ingresso aria di
raffreddamento motore deve
rimanere sempre libero.

3.2. SPIA DI AVVISO FILTRO BLOCCATO

Sull'aspiratore è installata una spia di avviso filtro bloccato. La luce si accende quando avviene un calo di aspirazione. In questo caso il sacco di raccolta potrebbe essere pieno, i filtri in tessuto (filtri principali e filtri di sicurezza) potrebbero necessitare di lavaggio oppure i filtri HEPA potrebbero dover essere sostituiti

ATTENZIONE: Quando la spia di filtro bloccato si accende, spegnere l'aspiratore il prima possibile poiché il filtro bloccato causa un aumento della temperatura all'interno dell'aspiratore che potrebbe danneggiare il motore.

Per la manutenzione fare riferimento alle sezioni "Pulizia e Manutenzione" e "Assemblaggio e sostituzione filtri HEPA".

3.3. STRATI DI POLVERE

ATTENZIONE: Pulire regolarmente la superficie dell'aspiratore con un panno inumidito con acqua per evitare accumuli di polvere che possono creare potenziali sorgenti di innesco.

3.4. LIMITAZIONI DI TEMPERATURA

In presenza di nubi di polvere

ATTENZIONE: La temperatura massima superficiale dell'aspiratore è di 200°C. Questa attrezzatura **non può essere utilizzata in presenza di una nube di polvere con temperatura minima di innesco inferiore a 300°C.**

In presenza di strati di polvere

ATTENZIONE: La temperatura massima superficiale dell'aspiratore è di 200°C. Questa attrezzatura **non può essere utilizzata in presenza di strato di polvere di 5mm con temperatura minima di innesco inferiore a 275°C.**

3.5. MATERIALE BRUCIANTE

ATTENZIONE: NON ASPIRARE NULLA CHE STIA BRUCIANDO O FUMANDO, COME CENERE CALDA, SIGARETTE, FIAMMIFERI O BRACI ACCESE.

3.6. LIQUIDI INFIAMMABILI

ATTENZIONE: QUESTO ASPIRATORE NON E' PROGETTATO PER IL RECUPERO DI LIQUIDI INFIAMMABILI. NON USARE QUESTO ASPIRATORE PER RECUPERARE LIQUIDI INFIAMMABILI.

3.7. POLVERI CONDUTTIVE E DI METALLO

ATTENZIONE: Per il recupero di più di 2 Kg (5 libbre) di polveri conduttive o polveri di metallo raccomandiamo di utilizzare un separatore ad immersione opzionale "wet mix" per recuperare la polvere in un bagno di liquido.

3.8. AUTO-INNESCO DELLA POLVERE

WARNING: NON USARE QUESTO ASPIRATORE PER IL RECUPERO DI POLVERE O MISTURE DI POLVERI CHE POSSONO AUTOINNESECCARSI.

3.9. INDICAZIONI SPECIALI PER UN UTILIZZO SICURO RIGUARDO LA GENERAZIONE DI CARICHE ELETTROSTATICHE

Quando l'aspiratore viene utilizzato come indicato in questo manuale è stato stabilito che non può verificarsi alcun accumulo significativo di cariche elettrostatiche che potrebbe fungere da potenziale fonte di innesco.

Tuttavia, per un utilizzo sicuro, si raccomanda di non eseguire alcuna azione specifica sugli elementi isolanti montati sull'aspiratore, come ad esempio un continuo sfregamento manuale, che potrebbero portare ad un accumulo significativo di carica elettrostatica.

Questa condizione speciale per un utilizzo sicuro è da osservare in particolare nei confronti delle maniglie di plastica, dei copripneumatici in plastica e del rivestimento verniciato dell'aspiratore.

4.0 ISTRUZIONI PRELIMINARI E ISTRUZIONI DI SICUREZZA IMPORTANTI

ATTENZIONE: L'aspiratore deve essere collegato a terra durante l'uso. **NON AZIONARE L'UNITA' SENZA UNA CORRETTA MESSA A TERRA.**

ATTENZIONE: L'aspiratore e gli accessori rimovibili sono completamente messi a terra grazie all'utilizzo di speciali materiali statico-dissipativi. Usare solo parti di ricambio forniti dal produttore o da un suo rivenditore autorizzato.

ATTENZIONE: L'aspiratore è fornito senza spina elettrica. E' di responsabilità dell'utilizzatore installare una spina adatta certificata per l'uso in aree classificate come pericolose.

ATTENZIONE: La spina deve essere installata solo da un elettricista qualificato. La spina deve essere collegata solo ad una presa appropriata installata e collegata a terra in accordo con le leggi e le ordinanze locali.

ATTENZIONE: Questo aspiratore è progettato per il recupero di soli materiali secchi e non può essere utilizzato o depositato all'esterno in condizioni di bagnato.

ATTENZIONE: Prima dell'utilizzo, gli operatori devono essere a conoscenza delle informazioni, delle istruzioni e devono essere addestrati per le applicazioni e le sostanze con le quali devono operare, compresi i metodi per lo smaltimento in sicurezza del materiale recuperato.

ATTENZIONE: Per la manutenzione, la macchina deve essere smontata, pulita e sottoposta a manutenzione, per quanto ragionevolmente possibile, senza causare rischi per il personale e altri. Le precauzioni adatte includono la decontaminazione prima dello smantellamento, la filtrazione dell'aria di scarico locale dove la macchina è smantellata, la pulizia dell'area di manutenzione e un'adeguata protezione personale.

ATTENZIONE: Il fabbricante, o una persona istruita, deve effettuare un controllo tecnico almeno una volta all'anno, consistente ad esempio, nell'ispezione di filtri alla ricerca di danni, la tenuta all'aria della macchina e il corretto funzionamento dell'interruttore. Inoltre, sulle macchine di classe H, l'efficienza di filtrazione della macchina dovrebbe essere testata almeno una volta all'anno, o più frequentemente come specificato negli standard internazionali.

ATTENZIONE: L'esterno della macchina deve essere decontaminato tramite la pulizia di un aspiratore e pulito o trattato con sigillante prima di essere tolto dall'area pericolosa. Tutte le parti della macchina devono essere considerate come contaminate quando vengono rimosse dalla zona pericolosa e devono essere prese misure appropriate per evitare la dispersione di polvere.

ATTENZIONE: Non è adatto per aspirare polveri o liquidi ad alto rischio esplosivo, né miscele di polvere combustibile con liquidi.

ATTENZIONE: Un uso improprio dell'aspiratore comporterà l'annullamento della garanzia.

- a. Consultare le normative elettriche locali e le autorità aventi giurisdizione prima dell'utilizzo. Assicurarsi che l'impianto elettrico sia compatibile con il voltaggio indicato sulla targa dato tecnico dell'aspiratore.
- b. Esaminare il cavo d'alimentazione dell'aspiratore per verificare eventuali danni (rottura o invecchiamento) prima di ogni utilizzo. Riportarlo al produttore per la manutenzione se danneggiato. Usare solo il cavo di alimentazione fornito con l'unità oppure uno acquistato dal produttore/rivenditore.
- c. Non tirare l'aspiratore per il cavo d'alimentazione.
- d. Spegnerne l'aspiratore e disconnettere il cavo di alimentazione prima di riporlo o prima di effettuare la manutenzione. Pulire e riparare l'aspiratore solo in **UN'AREA NON PERICOLOSA**.
- e. Aspiratore progettato per il solo uso all'interno.
- f. Il serbatoio di recupero deve essere pulito ed asciutto prima di ogni utilizzo dell'aspiratore.
- g. La macchina deve funzionare solo quando tutti i filtri sono in posizione e non danneggiati (Vedere paragrafo riguardo il sistema di filtrazione).
- h. Collegare solo ad una presa elettrica con appropriata messa a terra. Vedere "Istruzioni per la messa a terra".
- i. Utilizzare solo la prolunga ATEX corretta in base alla valutazione del rischio dell'utente finale
- j. Per polveri con energia di innesco inferiore ad 1mJ devono essere applicate restrizioni addizionali da parte delle autorità del lavoro.

5.0 PRECAUZIONI PER IL RECUPERO DI MATERIALI PERICOLOSI

ATTENZIONE: il modello PLANET 22 S ATEX non equipaggiato con filtro hepa non è adatto al il recupero di materiali pericolosi.

PERICOLO: se l'aspiratore è usato per recuperare polvere tossica o polvere pericolosa, le seguenti precauzioni di sicurezza devono essere adottate:

- a. L'aspiratore deve essere dotato di un filtro HEPA.
- b. La manutenzione e l'utilizzo della macchina devono essere eseguite solamente da personale addestrato.
- c. Si devono indossare abbigliamento adatto ed dispositivi personali di protezione mentre si utilizza o si effettua la manutenzione sull'aspiratore.
- d. Smaltire responsabilmente il materiale recuperato. Seguire le regolamentazioni governative locali applicabili per la disposizione dei materiali pericolosi.

ATTENZIONE: Questa macchina contiene polvere pericolosa per la salute. Le operazioni di svuotamento e manutenzione, compresa la rimozione della polvere recuperata, devono essere eseguite solo da personale autorizzato con abbigliamento di protezione adatto. Non utilizzare senza il sistema completo di filtrazione in posizione.

NOTA: non è stato studiato nessun pericolo per la salute dovuto all'uso dell'aspiratore per il recupero di amianto e altre sostanze pericolose.

6.0 ISTRUZIONI PER LA MESSA A TERRA

L'aspiratore dovrà essere provvisto di adeguato collegamento a terra. In caso di guasti o malfunzionamenti, la messa a terra fornisce un percorso di minima resistenza per la corrente elettrica, che riduce il rischio di scosse elettriche. L'aspiratore è dotato di un cavo provvisto di conduttore di messa a terra. L'aspiratore viene fornito senza spina elettrica. E' responsabilità dell'utente verificare che la presa elettrica sia dotata di messa a terra.

La spina deve essere installata solo da un elettricista qualificato. La spina deve essere inserita in una presa propriamente installata dotata di messa a terra in accordo con le ordinanze e le normative locali. Assicurarsi che i fusibili sul pannello elettrico siano della giusta taratura e che eccedano il massimo della corrente indicata sull'adesivo tecnico presente sull'aspiratore. Effettuare un test di continuità elettrica prima di ogni utilizzo dell'aspiratore. (Vedere sezione: Verifica della continuità di messa a terra).

ATTENZIONE: Questo aspiratore per ambienti pericolosi è equipaggiato con ruote conduttive che permettono un collegamento di messa a terra con il pavimento. Non sostituire le ruote conduttive ed usare solo ruote conduttive fornite dal produttore.

ATTENZIONE: Un improprio collegamento con la messa a terra può portare ad un rischio di shock elettrico. Controllare con un elettricista qualificato o con il personale della manutenzione se si è in dubbio riguardo la messa a terra della presa elettrica. Se la spina non entra nella presa, effettuare l'installazione di una presa appropriata da parte di un elettricista qualificato. Non utilizzare adattatori.

ATTENZIONE: Per garantire un'efficiente dissipazione dell'elettricità statica ed un funzionamento senza scintille, l'aspiratore deve essere collegato a terra durante l'uso.

PERICOLO: Non utilizzare l'aspiratore nel caso in cui la presa non sia messa a terra o la messa a terra non sia stata eseguita in modo corretto.

7.0 VERIFICA DELLA CONTINUITA' DI TERRA

ATTENZIONE: Prima di ogni uso verificare la continuità dell'aspiratore. Ciò permetterà di scaricare a terra l'elettricità statica durante il funzionamento dell'apparecchio.

WARNING: Usare solo le parti sostitutive fornite dal produttore o da un suo distributore autorizzato.

Per eseguire la seguente verifica della continuità elettrica occorre utilizzare un ohmmetro.

- a. Scollegare il cavo di alimentazione dalla presa.
- b. Assicurarsi che tutti i ganci sull'aspiratore siano chiusi e che il serbatoio rimovibile sia propriamente installato sull'aspiratore.
- c. Scollegare il tubo di aspirazione dall'aspiratore.
- d. Utilizzando l'ohmmetro verificare la continuità elettrica dell'aspiratore dal pin di terra posto al termine del cavo di alimentazione al bocchettone d'aspirazione dell'aspiratore. Una lettura compresa fra 10^6 Ohm e 10^9 Ohms o inferiore è sufficiente a garantire un adeguato collegamento a terra ed un'efficace dissipazione dell'elettricità statica.
- e. Utilizzando l'ohmmetro verificare la continuità elettrica del tubo di aspirazione da una estremità all'altra. Una lettura compresa fra 10^6 Ohms e 10^9 Ohms o inferiore è sufficiente a garantire un adeguato collegamento a terra ed un'efficace dissipazione dell'elettricità statica.

8.0 SISTEMA FILTRANTE

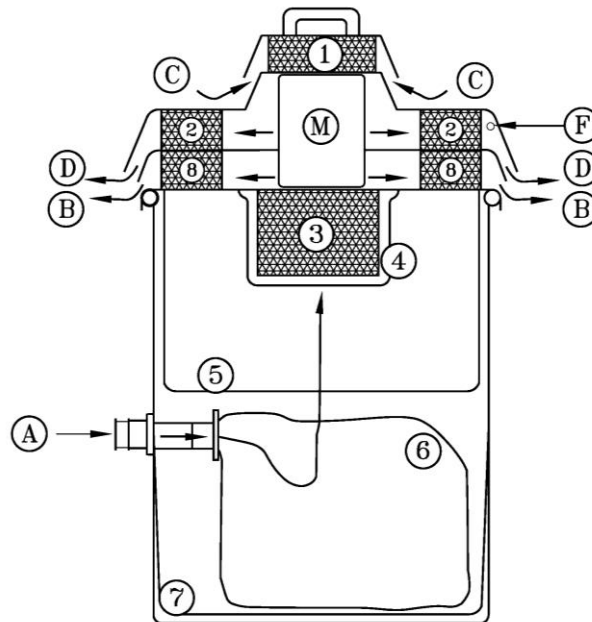


Figura 1

1 FILTRO ASSOLUTO HEPA PER ARIA RAFFREDDAMENTO MOTORE IN INGRESSO
(Con efficienza maggiore del 99,995% su 0,3 micron.)

2 FILTRO ASSOLUTO HEPA PER ARIA RAFFREDDAMENTO MOTORE IN USCITA
(Con efficienza maggiore del 99,995% su 0,3 micron.)

3 FILTRO ASSOLUTO HEPA PER ARIA AMBIENTE IN INGRESSO
(Con efficienza maggiore del 99,995% su 0,3 micron.)

4 FILTRO DI SICUREZZA (STATICO DISSIPATIVO)

5 FILTRO PRINCIPALE IN TESSUTO (STATICO DISSIPATIVO)

6 SACCO DI RACCOLTA (STATICO DISSIPATIVO)

7 SACCO DI RACCOLTA POLY LINER (STATICO DISSIPATIVO)

8 FILTRO ASSOLUTO HEPA PER ARIA DI LAVORO IN USCITA (Con efficienza maggiore del 99,995% su 0,3 micron.)

A PORTA DI ASPIRAZIONE

B ARIA DI LAVORO IN USCITA

C INGRESSO ARIA RAFFREDDAMENTO MOTORE

D USCITA ARIA RAFFREDDAMENTO MOTORE

F SPIA FILTRO BLOCCATO

M MOTORE

9.0 ISTRUZIONI PER IL RECUPERO DI MATERIALE SECCO

ATTENZIONE: Aspiratore progettato per il recupero di solo materiale secco. Non aspirare liquidi.

1. Disimpegnare i ganci e rimuovere la testata aspirante dal serbatoio di recupero.
2. Posizionare il poly liner (elemento #7 in Fig. 1) sul fondo del serbatoio.

NOTA Per evitare che il poly liner venga aspirato durante l'uso; premere il sacchetto lungo le pareti interne ed il fondo del serbatoio di recupero per eliminare l'aria intrappolata.

3. Posizionare il sacco di raccolta (elemento #6 in Fig. 1) nel serbatoio di recupero sul bocchettone di ingresso aria.
4. Posizionare il filtro principale in tessuto (elemento #5 in Fig. 1) sul serbatoio di recupero. Assicurarsi che la guarnizione del filtro copra interamente la circonferenza del bordo del serbatoio.

IMPORTANTE: Non usare questo aspiratore per recupero di materiale secco se i filtri in tessuto non sono installati.

5. Posizionare la testata aspirante sul serbatoio di recupero ed assicurare i ganci.
6. Collegare il tubo alla bocca di aspirazione sul lato del serbatoio di recupero e attaccare al tubo gli accessori desiderati.
7. Accendere l'aspiratore, mettendo l'interruttore su ON.
8. Per spegnere l'unità, posizionare l'interruttore su OFF. Scollegare il cavo di alimentazione quando non si utilizza l'aspiratore.

10.0 PULIZIA E MANUTENZIONE

SPIA DI AVVISO FILTRO BLOCCATO:

Una spia che avvisa il blocco del filtro è installata sull'aspiratore. La luce si accende per indicare un calo di potenza nell'aspirazione. In questo caso il sacco di raccolta potrebbe essere pieno, i filtri in tessuto potrebbero necessitare un lavaggio o i Filtri HEPA potrebbero dover essere sostituiti.

<p><u>ATTENZIONE:</u> Quando la spia di filtro bloccato si accende, spegnere l'aspiratore il prima possibile poiché il filtro bloccato causa un aumento della temperatura all'interno dell'aspiratore che potrebbe danneggiare il motore.</p>
--

<p><u>IMPORTANTE:</u> Raccomandiamo di effettuare la seguente manutenzione dopo ogni utilizzo e dopo un massimo di 8 ore consecutive di utilizzo.</p>
--

ATTENZIONE: Prima di effettuare la pulizia e la manutenzione dell'aspiratore scollegare il cavo di alimentazione.

- a Smaltire e sostituire il sacco filtrante quando pieno con un nuovo sacco.
- b Svuotare e pulire il serbatoio di recupero.

ATTENZIONE: Svuotare il serbatoio di recupero quando necessario ma anche dopo ogni utilizzo (turno di 8 ore). Non permettere al materiale recuperato di depositarsi per un lungo periodo di tempo. Un eccessivo accumulo di materiali raccolti può creare un pericolo di innesco.

- c E' raccomandabile pulire i filtri regolarmente. Filtri sporchi riducono il flusso d'aria e le prestazioni dell'aspiratore. I filtri in tessuto (filtro principale e di sicurezza) possono essere lavati con acqua calda (non sono necessari detergenti).

IMPORTANTE: Assicurarsi che i filtri siano completamente asciutti prima di reinstallarli nell'aspiratore. Non reinstallare i filtri in tessuto ancora bagnati.

- A I filtri in tessuto devono essere sostituiti ogni due o tre anni a seconda dell'uso.
- B Ispezionare i filtri in tessuto regolarmente. Se il filtro è lacerato, sostituire immediatamente. Un filtro lacerato permette alla polvere e ad altri materiali di entrare nel motore e potrebbe causare un logoramento prematuro del motore stesso.
- C Pulire il tubo per rimuovere accumuli di polvere, detriti o materiale recuperato.
- D Il filtro HEPA deve essere sostituito annualmente, oppure ogni due anni, a seconda dell'uso.

ATTENZIONE: Non utilizzare il filtro HEPA dopo averlo rimosso dall'aspiratore.

ATTENZIONE: Tenere pulito il cavo di alimentazione ed ispezionarlo per verificarne eventuali tagli o rotture.

ATTENZIONE: Durante le operazioni di manutenzione o di riparazione, tutti gli attrezzi contaminati che non possono essere sufficientemente puliti, devono essere eliminati; questi devono essere riposti in una scatola impermeabile in accordo con le correnti normative riguardo l'eliminazione di questi rifiuti.

ATTENZIONE: Pulire regolarmente la superficie dell'aspiratore con un panno umido per evitare accumulo di polvere che potrebbe creare una potenziale sorgente di innesco.

11.0 MONTAGGIO E SOSTITUZIONE FILTRO HEPA

Il filtro HEPA è progettato per la filtrazione di particelle ultra-fini. Un filtro HEPA intasato riduce il flusso d'aria e quindi le prestazioni dell'aspiratore e quindi richiede una sostituzione.

La vita del filtro HEPA dipende maggiormente dall'uso dell'aspiratore. E' raccomandabile che il filtro HEPA sia rimpiazzato una volta all'anno se l'aspiratore è usato in maniera intensiva (giornalmente). Il filtro può essere sostituito ogni due anni se l'aspiratore è usato meno frequentemente (due o tre volte la settimana).

ATTENZIONE: Se l'aspiratore è usato per recuperare materiali tossici è necessario indossare appropriati vestiti ed apparati respiratori quando si effettua la manutenzione sull'alloggiamento del filtro HEPA o altre parti contaminate dell'unità.

11.1. SOSTITUZIONE DEL FILTRO HEPA PER L'ARIA DI INGRESSO RAFFREDDAMENTO MOTORE (ELEMENTO #1 IN FIG. 1 VEDI SEZIONE 8 PER L'ILLUSTRAZIONE)

1. Scollegare il cavo di alimentazione dalla presa di corrente.
2. Svitare i tre bulloni che assicurano la parte superiore della testata aspirante al coperchio.
3. Rimuovere ed eliminare il vecchio filtro HEPA.
4. Ispezionare attentamente la guarnizione sigillante per individuare usura ed eventuali rotture. Sostituire la guarnizione se danneggiata.
5. Posizionare il nuovo filtro nel coperchio.
6. Assicurare la parte superiore della testata aspirante al coperchio usando i tre bulloni.
7. Smaltire il filtro contaminato in accordo con le regole governative. (Se applicabili)

11.2. SOSTITUZIONE DEL FILTRO HEPA PER L'ARIA IN USCITA RAFFREDDAMENTO MOTORE (ELEMENTO #2 IN FIG. 1 VEDI SEZIONE 8 PER L'ILLUSTRAZIONE)

1. Scollegare il cavo di alimentazione dalla presa di corrente.
2. Svitare i sei bulloni che assicurano la parte intermedia della testata aspirante al coperchio.
3. Rimuovere ed eliminare il vecchio filtro HEPA.
4. Ispezionare attentamente la guarnizione del filtro HEPA. Sostituire la guarnizione se danneggiata.
5. Posizionare il nuovo filtro nel coperchio.
6. Assicurare la parte intermedia della testata aspirante al coperchio usando i sei bulloni.
7. Smaltire il filtro contaminato in accordo con le regole governative. (Se applicabili)

11.3. SOSTITUZIONE DEL FILTRO HEPA PER L'ARIA AMBIENTE IN USCITA (ELEMENTO #8 IN FIG. 1 VEDI SEZIONE 8 PER L'ILLUSTRAZIONE)

1. Scollegare il cavo di alimentazione dalla presa di corrente.
2. Svitare i sei bulloni che assicurano la parte inferiore della testata aspirante al coperchio.
3. Rimuovere ed eliminare il vecchio filtro HEPA.
4. Ispezionare attentamente la guarnizione del filtro HEPA. Sostituire la guarnizione se danneggiata. (Codice #215372G)
5. Posizionare il nuovo filtro nel coperchio. (Codice #215372)
6. Assicurare la parte inferiore della testata aspirante al coperchio usando i sei bulloni.
7. Smaltire il filtro contaminato in accordo con le regole governative. (Se applicabili)

11.4. SOSTITUZIONE DEL FILTRO HEPA PER L'ARIA AMBIENTE IN INGRESSO (ELEMENTO #3 VEDI SEZIONE 7 PER L'ILLUSTRAZIONE)

1. Scollegare il cavo di alimentazione dalla presa di corrente.
2. Disimpegnare i ganci e rimuovere la testata aspirante dal serbatoio di recupero.
3. Rimuovere il coperchio del filtro.
4. Svitare il bullone che assicura il filtro HEPA al di sotto del coperchio.
5. Eliminare il vecchio filtro HEPA.
6. Ispezionare attentamente la guarnizione per verificare rotture ed usura. Sostituire la guarnizione se danneggiata.
7. Inserire il nuovo filtro HEPA.
8. Assicurare il filtro HEPA usando il bullone.
9. Riposizionare il filtro di sicurezza.
10. Smaltire il filtro contaminato in accordo con le regole governative. (Se applicabili)

12.0 DEPOSITO

Si raccomanda che l'interno del serbatoio di recupero sia pulito ed asciutto quando si deposita l'aspiratore.

13.0 SPECIFICHE TECNICHE

Voltaggio	220-240 V
Frequenza	50/60Hz
Fasi	Single
P_m^*	1080 W
Potenza	1.2 kW
Amperaggio	5 A
Portata	194 m ³ /h
Depressione	245 hPa / 2504 mm H ₂ O
Livello Sonoro	72 dB(A)
Spina	Not Included
Bocchettone di aspirazione	60 mm
Carrello	4 Wheel Dolly (4W)
Sacco filtro usa e getta	19 liters
Lunghezza	43 cm
Larghezza	43 cm
Peso macchina	24 kg.
Altezza	102 cm
Lunghezza cavo	10 m

** Normale utilizzo: condizioni in cui la macchina viene utilizzata in condizioni normali, ottenuta alimentando il motore con una potenza P_m .*

14.0 RISOLUZIONE DEI PROBLEMI:

PROBLEMA	PROBABILE CAUSA	SOLUZIONE
Diminuzione della potenza aspirante	I filtri in tessuto potrebbero essere eccessivamente sporchi o coperti di polvere.	Lavare o sostituire i filtri in tessuto
	Il serbatoio di recupero potrebbe essere pieno	Svuotare il serbatoio di recupero
	Il tubo di aspirazione o gli accessori potrebbero essere bloccati	Eliminare il blocco usando un manico di scopa o altri attrezzi adatti
	Il Filtro HEPA potrebbe essere intasato	Cambiare il Filtro HEPA

15.0 ALLEGATI

Fare riferimento ai seguenti documenti per le informazioni necessarie circa l'installazione, la manutenzione e la conformità dei componenti certificati EX assemblati nell'apparecchiatura.

- Cable gland model GHG 960 - EC Type Examination Certificate No. PTB 14 ATEX 1015X (6 pages)
- Cable gland model GHG 960 – Operating instructions (12 pages)

16.0 DICHIARAZIONE DI CONFORMITA' CE



Integrated
Professional
Cleaning

DICHIARAZIONE DI CONFORMITA' CE

IPCleaning S.r.l.

Via E. Fermi 2, 26022 Castelverde (Cremona), Italia



Dichiara, sotto la propria responsabilità, che le seguenti attrezzature:

Aspiratori Industriali a Dissipazione Statica / con messa a terra
Alimentazione elettrica per recupero materiale secco, inclusi accessori,

Modello:

PLANET 22 S ATEX

Recanti la seguente marcatura:

  II 3 D Ex h tc IIIC T200°C Dc IP6X

In base a questa dichiarazione, è stato progettato e costruito nel rispetto dei requisiti essenziali e delle altre disposizioni rilevanti delle seguenti direttive vigenti:

1. Direttiva ATEX 2014/34/EU

La conformità è stata ottenuta mediante l'applicazione delle seguenti norme:

- EN IEC 60079-0:2018
- EN 60079-31:2014
- EN ISO 80079-36: 2016
- EN ISO 80079-37: 2016
- EN 1127-1:2019

Per le quali è stato istituito un controllo interno di produzione

Questa apparecchiatura è conforme ai requisiti di sicurezza elettrica, come espresso nella **Direttiva Macchine 2006/42/EC** ed è stata costruita in conformità alle seguenti norme standard:

- EN 60204-1: 2018
- EN 60335-1: 2012 and its Amendment A11: 2014 and A13: 2017
- EN 60335-2-69: 2012

2. Direttiva per la Compatibilità Elettromagnetica 2014/30/UE

La conformità è stata ottenuta mediante l'applicazione delle seguenti norme:

- EN 61000-6-1:2007
- EN 61000-6-3:2007 and its Amendment A1: 2011

Oggetto da utilizzare per lo scopo per cui è stato progettato in conformità alle norme pertinenti e con le raccomandazioni del costruttore. Noi, i sottoscritti, dichiariamo che l'apparecchiatura di cui sopra è conforme alle Direttive ed alle norme elencate.

Castelverde, 30 luglio 2021

Rappresentante Legale
dott. Pietro Annibaldi Corsano



(1) **EU-TYPE-EXAMINATION CERTIFICATE**
(Translation)

(2) Equipment or Protective Systems Intended for Use in
Potentially Explosive Atmospheres - **Directive 2014/34/EU**

(3) EU-Type Examination Certificate Number:

PTB 14 ATEX 1015 X

Issue: 01

(4) Product: Cable gland type GHG 960 **** * ****

(5) Manufacturer: COOPER Crouse-Hinds GmbH

(6) Address: Neuer Weg Nord 49, 69412 Eberbach, Germany

(7) This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 17 of the Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in the confidential Test Report PTB Ex 16-15133.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0:2012 + A11:2013, EN 60079-7:2015, EN 60079-31:2014

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.


(11) This EU-Type Examination Certificate relates only to the design and construction of the specified product in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

(12) The marking of the product shall include the following:

 **II 2 G Ex eb IIC Gb**
 **II 2 D Ex tb IIIC Db**

Konformitätsbewertungsstelle, Sektor Explosionsschutz
On behalf of PTB:

Braunschweig, January 16, 2017


Dr.-Ing. D. Markus
Oberregierungsrat



sheet 1/6

EU-Type Examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt. In case of dispute, the German text shall prevail.

(13)

SCHEDULE

(14) **EU-Type Examination Certificate Number PTB 14 ATEX 1015 X, Issue: 01**

(15) Description of Product

The cable gland, type GHG 960 **** * ****, made of polyamide serves to introduce permanently laid cables into electrical equipment of the type of protection Increased Safety "eb" and Protection by enclosure "tb". The cable entry is composed of intermediate glands with two different widths of threaded joint, sealing rings of different designs and a cap nut. Accessories are: blanking plug, reducing gland, multiple cable gland, flat cable gland and expansion gland. The cap nut is optionally made in black resp. blue for the distinction of Ex-e and Ex-i circuits.

They are installed in enclosures with through-holes or threaded holes, with or without lock nut.

Technical data

Type	Ø Clamping range in mm	Service temperature	One pcs.	Packing set
Cable Gland M12	Ø 5 – 7	-20°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Cable Gland M16	Ø 5.5 – 7 Ø 7 – 10	-20°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Cable Gland M20	Ø 5.5 – 7 Ø 7 – 9 Ø 9.5 – 13	-20°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Cable Gland M20	Ø 5.5 – 7 Ø 7 – 9 Ø 9.5 – 11	-40°C - +70°C	GHG 960 9248 P****	GHG 960 1955 R****
Cable Gland M25	Ø 8 – 10 Ø 10 – 13 Ø 13.5 – 17.5	-25°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Cable Gland M25	Ø 8 – 10 Ø 10 – 13 Ø 13.5 – 15	-55°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Cable Gland M32	Ø 14 – 17 Ø 17.5 – 21	-55°C - +70°C	GHG 960 9248 P****	GHG 960 1955 R****
Cable Gland M32	Ø 14 – 17 Ø 17.5 – 21	-20°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Cable Gland M40	Ø 19 – 22 Ø 22 – 28	-55°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Cable Gland M50	Ø 24 – 28 Ø 28 – 35	-55°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Cable Gland M63	Ø 29 – 35 Ø 36 – 41 *	-55°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Extension gland M16/M20X1.5	Ø 5.5 – 7 Ø 7 – 9 Ø 9.5 – 13	-20°C - +70°C	GHG 960 9244 P****	GHG 960 1956 R****
Extension gland M20/M25X1.5	Ø 8 – 10 Ø 10 – 13 Ø 13.5 – 15	-20°C - +70°C	GHG 960 9244 P****	GHG 960 1956 R****
Extension gland M25/M32X1.5	Ø 14 – 17 Ø 17.5 – 21	-55°C - +70°C	GHG 960 9244 P****	GHG 960 1956 R****
Extension gland M32/M40X1.5	Ø 19 – 22 Ø 22 – 28	-55°C - +70°C	GHG 960 9244 P****	GHG 960 1956 R****
Extension gland M40/M50X1.5	Ø 24 – 28 Ø 28 – 35	-55°C - +70°C	GHG 960 9244 P****	GHG 960 1956 R****
Extension gland M50/M63X1.5	Ø 29 – 35 Ø 36 – 41 *	-55°C - +70°C	GHG 960 9244 P****	GHG 960 1956 R****
Reducing gland M16-M12		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M20-M12		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M20-M16		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M25-M12		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M25-M16		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M25-M20		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M32-M12		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M32-M16		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M32-M20		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****

sheet 2/6

EU-Type Examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt. In case of dispute, the German text shall prevail.

SCHEDULE TO EU-TYPE EXAMINATION CERTIFICATE PTB 14 ATEX 1015 X, Issue: 01

Torque cable gland

Type	Service temperature range	Impact energy	Clamping range	Torque Pressure screw	Torque Gland body
KLE	°C	Joule	Ø mm	Nm	Nm
M16	-20 - +70	low, 4	5.5 – 7.0 7.0 – 10.0	1.0 / 1.0 1.0 / 1.4	3.3
M20	-20 - +70	high, 7	5.5 – 7.0 7.0 – 9.0 9.5 – 13.0	1.5 / 1.0 1.5 / 1.4 1.0 / 1.7	2.7
M20	-40 - +70	low, 4	5.5 – 7.0 7.0 – 9.0 9.5 – 13.0	1.5 / 1.0 1.5 / 1.4 1.0 / 1.7	2.7
M20 split gasket	-20 - +70	high, 7	2,0 7.0 – 9.0	3,5 1.5 / 1.4	2.7
M25	-20 - +70	high, 7	10.0 – 13.0 13.5 – 17.5	2.3 / 2.6 1.3 / 2.3	3.0
M25	-25 - +70	high, 7	8.0 – 10.0 10.0 – 13.0 13.5 – 17.5	1.5 / 2.0 2.3 / 2.6 1.3 / 2.3	3.0
M25	-55 - +70	high, 7	8.0 – 10.0 10.0 – 13.0 13.5 - 15	1.5 / 2.0 2.3 / 2.6 1.5 / 2.3	3.0
M25 flat cable	-55 - +70 (+110°C)	high, 7	5-8x11-12.5 6-8x11-14	5.0 3.5	5.0
PG16	-25 - +70	high, 7	10.0 – 13.0 13.5 – 15.0	2.3 / 2.6 1.5 / 2.3	5.0
PG16	-55 - +70	high, 7	10.0 – 13.0 13.5 - 17.5	2.3 / 2.6 1.3 / 2.3	5.0
M32	-20 - +70	high, 7	14.0 – 17.0 17.5 – 21.0	3.0 / 4.0 1.5 / 1.3	5.0
M32	-55 - +70	high, 7	14.0 – 17.0 17.5 – 21.0	3.0 / 4.0 1.5 / 1.3	5.0
M40	-55 - +70	high, 7	19.0 – 22.0 22.0 – 28.0	3.3 / 5.5 3.3 / 6.7	7.5
M50	-55 - +70	high, 7	24.0 – 28.0 28.0 – 35.0	6.0 / 7.0 5.0 / 7.0	7.5
M63	-55 - +70	high, 7	29.0 – 35.0 36.0 - 41.0	12.0 / 12.0 12.0 / 13.0	7.5

Torque multiple cable gland

Type	Service temperature range	Impact energy	Clamping range	Torque Pressure screw	Torque Gland body
KLE	°C	Joule	Ø mm	Nm	Nm
M25 2-fach	-20 - +70	high, 7	2x 4.5 – 7.0	2.0 / 2.0	3.0
M32 4-fach	-20 - +70	high, 7		3.0 / 3.5	5.0

SCHEDULE TO EU-TYPE EXAMINATION CERTIFICATE PTB 14 ATEX 1015 X, Issue: 01

Torque extension cable gland

Type	Service temperature range	Impact energy	Clamping range	Torque Pressure screw	Torque Gland body
KLE	°C	Joule	Ø mm	Nm	Nm
M16/M20	-20 - +70	high, 7	5.5 – 7.0 7.0 – 9.0 9.5 – 13.0	1.0 / 1.0 1.5 / 1.4 1.0 / 1.7	2.7
M16/M20	-40 - +70	low, 4	5.5 – 7.0 7.0 – 9.0 9.5 – 13.0	1.5 / 1.0 1.5 / 1.4 1.0 / 1.7	2.7
M20/M25	-20 - +70	high, 7	8.0 – 10.0 10.0 – 13.0 13.5 – 17.5	1.5 / 1.0 2.3 / 2.6 1.3 / 2.3	3.0
M20/M25	-55 - +70	high, 7	8.0 – 10.0 10.0 – 13.0 13.5 – 15.0	1.5 / 2.0 2.3 / 2.6 1.5 / 2.3	3.0
M25/M32	-55 - +70	high, 7	14.0 – 17.0 17.5 – 21.0	3.0 / 4.0 1.5 / 1.3	5.0
M32/M40	-55 - +70	high, 7	19.0 – 22.0 22.0 – 28.0	3.3 / 5.5 3.3 / 6.7	7.5
M40/M50	-55 - +70	high, 7	24.0 – 28.0 28.0 – 35.0	6.0 / 7.0 5.0 / 7.0	7.5
M50/M63	-55 - +70	high, 7	29.0 – 35.0 36.0 – 41.0 (41.0 – 48.0)	12.0 / 12.0 12.0 / 13.0 (13.0 / 7.8)	7.5

Nomenclature

GHG 960	****	*	****
1	2	3	4

- 1) Type
- 2) Design see table 1 above
- 3) P = Single part
R = Packing set
- 4) Variants e.g. colour, thread length, blanking elements, size, etc.

Details of change:

- 1) New test according to EN 60079-31:2014 and EN 60079-7:2015.
- 2) The sizes M16 to M25 have got an additional sealing ring.
- 3) The size G26 of the flat cable gland has been changed to G24.
- 4) The minimum ambient temperature of size M25x1.5 is changed to -25 °C

(16) Test Report PTB Ex16-15133

SCHEDULE TO EU-TYPE EXAMINATION CERTIFICATE PTB 14 ATEX 1015 X, Issue: 01

(17) Specific conditions of use

Only permanently installed cables may be entered through the glands. The operating company must ensure that adequate strain relief is provided.

The degree of protection (IP66) will only be met if seals and cable glands are properly fitted. The manufacturer's instructions must be followed.

The types with low impact energy have to be mounted in the enclosure, so they are mechanically protected against impact energy.

The blanking plug type GHG 960 6107 P**** resp. GHG 960 1944 R**** shall only be used with the cable glands type GHG 960 92** P**** resp. GHG 960 19** R****.

(18) Essential health and safety requirements

Met by compliance with the aforementioned standards.

According to Article 41 of Directive 2014/34/EU, EC-type examination certificates which have been issued according to Directive 94/9/EC prior to the date of coming into force of Directive 2014/34/EU (April 20, 2016) may be considered as if they were issued already in compliance with Directive 2014/34/EU. By permission of the European Commission supplements to such EC-type examination certificates and new issues of such certificates may continue to hold the original certificate number issued before April 20, 2016.

Konformitätsbewertungsstelle, Sektor Explosionsschutz
On behalf of PTB:

Braunschweig, January 16, 2017

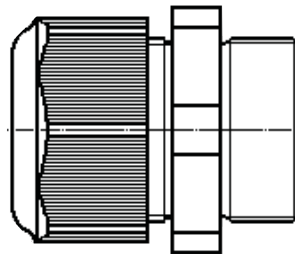

Dr.-Ing. D. Markus
Oberregierungsrat



Explosiongeschützte Kabel- und Leitungseinführungen,
Verschlussstopfen, Schraubverschlüsse, Trompetenverschraubungen,
Reduzierungen und Entwässerungsstopfen

Explosion-protected cable entries, blanking plugs, screw plugs,
trumpet-shaped cable glands, reducing glands and drain plugs

Entrées de câble, bouchons filetés, bouchons de fermeture,
presses-étoupes à trompette, bagues de réduction et bouchons de
purge pour atmosphères explosives



CZ: "Tento návod k použití si můžete vyžádat ve svém mateřském jazyce u příslušného zastoupení společnosti Cooper Crouse-Hinds/CEAG ve vaší zemi."

DK: "Montagevejledningen kan oversættes til andre EU-sprog og rekvireres hos Deres Cooper Crouse-Hinds/CEAG leverandør"

E: "En caso necesario podrá solicitar de su representante Cooper Crouse-Hinds/CEAG estas instrucciones de servicio en otro idioma de la Union Europea"

EST: "Seda kasutusjuhendit oma riigikeeles võite küsida oma riigis asuvasest asjaomasest Cooper Crouse-Hinds/CEAG esindusest."

FIN: "Tarvittaessa tämän käyttöohjeen käännös on saatavissa toisella EU:n kielellä Teidän Cooper Crouse-Hinds/CEAG - edustajaltanne"

GR: *Εάν χρειασθεί, μεταφραση των οδηγιών χρήσεως σε άλλη γλώσσα της ΕΕ, μπορεί να ζητηθεί από τον Αντιπροσωπο της Cooper Crouse-Hinds/CEAG*

H: "A kezelési útmutatót az adott ország nyelvén a Cooper Crouse-Hinds/CEAG cég helyi képviselőtől igényelheti meg."

I: "Se desiderate la traduzione del manuale operativo in un'altra lingua della Comunità à Europea potete richiederla al vostro rappresentante Cooper Crouse-Hinds/CEAG"

LT: "Šios naudojimo instrukcijos, išverstos į Jūsų gimtąją kalbą, galite pareikalauti atsakingoje "Cooper Crouse-Hinds/CEAG" atstovybėje savo šalyje."

LV: "Šo ekspluatācijas instrukciju valsts valodā varat pieprasīt jūsu valsts atbildīgajā Cooper Crouse-Hinds/CEAG pārstāvniecībā."

M: "Jistghu jitolbu dan il-manwal fil-lingwa nazzjonali taghhom minghand ir-rappreżentant ta' Cooper Crouse Hinds/CEAG f'pajjiżhom."

NL: "Indien noodzakelijk kan de vertaling van deze gebruiksinstructie in een andere EU-taal worden opgevraagd bij Uw Cooper Crouse-Hinds/CEAG - vertegenwoordiging"

P: "Se for necessária a tradução destas instruções de operação para outro idioma da União Europeia, pode solicita-la junto do seu representante Cooper Crouse-Hinds/CEAG"

PL: "Niniejszą instrukcję obsługi w odpowiedniej wersji językowej można zamówić w przedstawicielstwie firmy Cooper-Crouse-Hinds/CEAG na dany kraj."

S: "En översättning av denna montage- och skötselinstruktion till annat EU - språk kan vid behov beställas från Er Cooper Crouse-Hinds/CEAG- representant"

SK: "Tento návod na obsluhu Vám vo Vašom rodnom jazyku poskytne zastúpenie spoločnosti Cooper Crouse-Hinds/CEAG vo Vašej krajine."

SLO: "Navodila za uporabo v Vašem jeziku lahko zahtevate pri pristojnem zastopništvu podjetja Cooper Crouse-Hinds/CEAG v Vaši državi."

RUS: "При необходимости, вы можете запрашивать перевод данного руководства на другом языке ЕС или на русском от вашего Cooper Crouse-Хиндс / CEAG - представителяй."

GHG 960 7001 P0001 D/GB/F (s)



Kabel- und Leitungseinführungen,
Verschlussstopfen,
Schraubverschlüsse, Trompeten-
verschraubungen, Reduzierungen
und Entwässerungsstopfen

Cable entries, blanking plugs,
screw plugs, trumpet-shaped cab-
le glands, reducing glands
and drain plugs

Entrées de câble, bouchons filetés,
bouchons de fermeture, presses-
étoupes à trompette, bagues de
réduction et bouchons de purge

Inhaltsverzeichnis:

1	Technische Daten	3
2	Legende.....	9
2.1	Sicherheitshinweise	9
3	Normenkonformität	9
4	Verwendungsbereich.....	9
5	Verwendung / Eigenschaften	9
6	Installation.....	10
6.1	Montage.....	10
6.2	Inbetriebnahme	12
7	Instandhaltung / Wartung.....	12
8	Reparatur / Instandsetzung / Änderung.....	12
9	Entsorgung / Wiederverwertung	12

Konformitätserklärung
separat beigelegt.

Contents:

1	Technical data	13
2	Legend	19
2.1	Safety instructions.....	19
3	Conformity with standards	19
4	Field of application.....	19
5	Application / Properties	19
6	Installation.....	20
6.1	Mounting	20
6.2	Putting into operation	22
7	Maintenance / Servicing	22
8	Repairs / Modifications	22
9	Disposal / Recycling.....	22

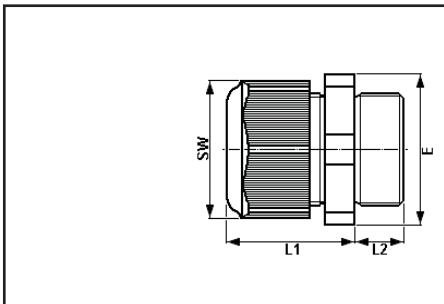
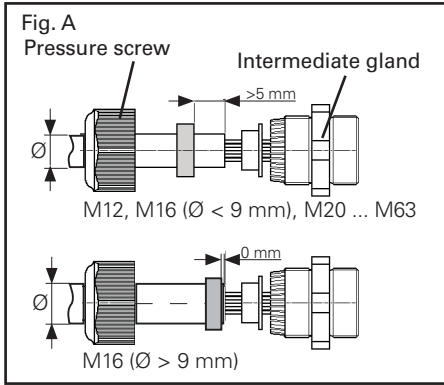
Declaration of conformity,
enclosed separately.

Contenu:

1	Caractéristiques techniques	23
2	Légende.....	29
2.1	Consignes de sécurité	29
3	Conformité aux normes	29
4	Domaine d'utilisation.....	29
5	Utilisation / Propriétés	29
6	Installation.....	30
6.1	Montage.....	30
6.2	Mise en service	32
7	Maintien/Entretien	32
8	Réparations / Remise en état.....	32
9	Évacuation des déchets / Recyclage	32

Déclaration de conformité,
jointe séparément.

Dimension drawings and dimensions in mm



1 Technical data

1.1 Technical details for: Cable entries (KLE) M12x1,5 to M63x1,5

ATEX type examination certificate:	PTB 14 ATEX 1015 X ^(A)
Marking acc. to 2014/34/EU and standard:	EN 60079-0
	⊕ II 2 G Ex e IIC Gb
	⊕ II 2 D Ex tb IIIC Db
IECEx type examination certificate:	IECEx PTB 14.0027X ^(A)
Category of application:	IEC60079-0
	Ex e IIC Gb
	Ex tb IIIC Db

^(A) The EC-Type Examination Certificate and any future supplements thereto shall, at the same time, be regarded as supplements to the EC-Type Examination Certificates PTB 99 ATEX 3128 X and PTB 99 ATEX 3101 X

Perm. storage temperature in original packing:	-20° C to +70° C
Degree of protection to IEC/EN 60529:	IP 66* ⁽¹⁾ (when fully assembled)

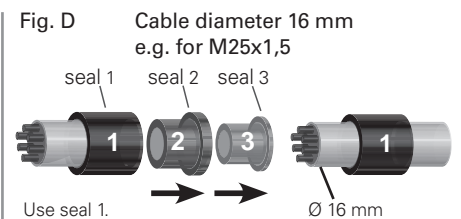
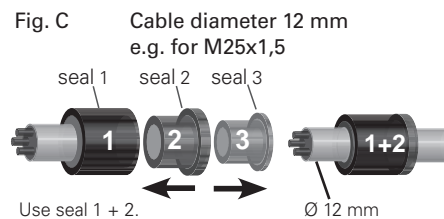
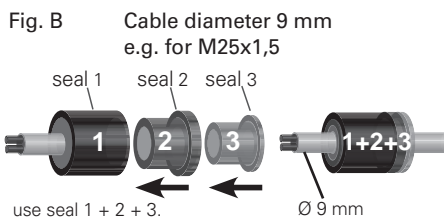
*⁽¹⁾ M40, M50 und M63 with suitable flange seal

Type	SW	L1	L2	E	weight app.
M12x1,5	15 mm	19,3 mm	12 / 8 mm	16,2 mm	3,4 g
M16x1,5	20 mm	23,0 mm	12 / 8 mm	22,0 mm	6,5 g
M20x1,5	24 mm	25,0 mm	13 / 8 mm	26,5 mm	10,1 g
M25x1,5	29 mm	29,5 mm	13 / 8 mm	32,0 mm	16,9 g
M32x1,5	36 mm	35,5 mm	15 / 10 mm	40,0 mm	27,6 g
M40x1,5	46 mm	39,5 mm	15 / 10 mm	50,5 mm	50,3 g
M50x1,5	55 mm	44,0 mm	16 / 12 mm	60,0 mm	75,9 g
M63x1,5	68 mm	47,0 mm	16 / 12 mm	75,0 mm	117,6 g

Type	operating temperature	impact resistance	Cable diameter											Screw-in thread in enclosure	Colour of dust protection cover		
			Seal 1+2+3 ⁽¹⁾⁽²⁾⁽³⁾						Seal 1+2 ⁽¹⁾⁽²⁾				Seal 1 ⁽¹⁾				
			min.		max.		min.		max.		min.	max.	min.			max.	
	°C	Joule	∅	Nm**	∅ ⁽¹⁾⁽²⁾	Nm**	∅	Nm**	∅ ⁽¹⁾⁽²⁾	Nm**	∅	Nm**	∅ ⁽²⁾	Nm**	Nm**		
M12x1,5	-20 - 70	4									5,0	0,8	7,0	1,0	1,2	white	
M16x1,5	-20 - 70	4						5,5	1,0	7,0	1,0	7,0	1,0	10,0	1,4	3,3	white
M20x1,5	-20 - 70	7	5,5	1,5	7,0	1,0	7,0	1,5	9,0	1,4	9,5	1,0	13,0	1,7	2,7	white	
M20x1,5	-40 - 70	4	5,5	1,5	7,0	1,0	7,0	1,5	9,0	1,4	9,5	1,0	11,0	1,7	2,7	green	
M25x1,5	-20 - 70	7	8,0	1,5	10,0	2,0	10,0	2,3	13,0	2,6	13,5	1,3	17,5	2,3	3,0	white	
M25x1,5	-55 - 70	7	8,0	1,5	10,0	2,0	10,0	2,3	13,0	2,6	13,5	1,5	15,0	2,3	3,0	green	
M32x1,5	-20 - 70	7					14,0	3,0	17,0	4,0	17,5	1,5	21,0	1,3	5,0	white	
M32x1,5	-55 - 70	7					14,0	3,0	17,0	4,0	17,5	1,5	21,0	1,3	5,0	green	
M40x1,5	-55 - 70	7					19,0	3,3	22,0	5,5	22,0	3,3	28,0	6,7	7,5	green	
M50x1,5	-55 - 70	7					24,0	6,0	28,0	7,0	28,0	5,0	35,0	7,0	7,5	green	
M63x1,5	-55 - 70	7					29,0	12,0	35,0	12,0	36,0	12,0	41,0	13,0	7,5	green	
additional seal							41,0	13,0	48,0	7,8							

** Test torques at 20°C

⁽¹⁾ The tests of clamping ranges and torque values were performed with metal mandrel. The clamping range can vary by using cables with different manufacturing tolerances and material properties. Please use the combination of sealing 1 + 2 + 3 for the intermediate region.
⁽²⁾ When selecting the seal rubber, ensure that the cap nut can be tightened when carrying out any future maintenance work on the cable entry.



Cable entries, blanking plugs, screw plugs, trumpet-shaped cable glands, reducing glands and drain plugs

Dimension drawings and dimensions in mm

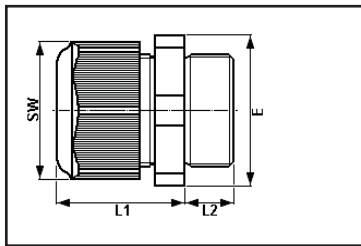
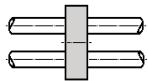


Fig. D/1 Seal insert



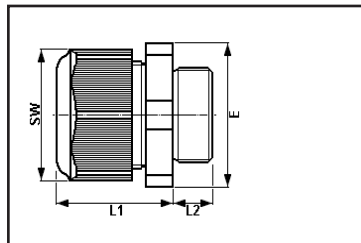
for multiple gland

1.2 Multiple glands

Type	SW	L1	L2	E	weight app.
M25x1,5 2- times	29 mm	29,5 mm	13 / 8 mm	32,0 mm	16,9 g
M32x1,5 4- times	36 mm	35,5 mm	15 / 10 mm	40,0 mm	27,6 g

Type	Operating temperature	Impact resistant	Cable diameter				
			Seal 1				
			min.		max.		
	°C	Joule	Ø	Nm	Ø	Nm	
M25x1,5 2- times	-20 - 70	< 7	2x	4,5	2,0	7,0	2,0
M32x1,5 4- times	-20 - 70	< 7	4x	4,5	3,0	7,0	3,5

1.3 Enlargement glands



Type	SW	L1	L2	E	weight app.
M16x1,5 / M20x1,5	24 mm	25,0 mm	12 mm	26,5 mm	9,2 g
M20x1,5 / M25x1,5	29 mm	29,5 mm	13 mm	32,0 mm	16,7 g
M25x1,5 / M32x1,5	36 mm	35,5 mm	15 mm	40,0 mm	27,0 g
M32x1,5 / M40x1,5	46 mm	39,5 mm	15 mm	50,5 mm	46,5 g
M40x1,5 / M50x1,5	55 mm	44,0 mm	15 mm	60,0 mm	73,5 g
M50x1,5 / M63x1,5	68 mm	47,0 mm	16 mm	75,0 mm	106,4 g

Type	Operating temperature	Impact resistant	Cable diameter												Screw-in thread in enclosure
			Seal 1+2+3 1 2 3						Seal 1+2 1 2				Seal 1 1		
			min.		max.		min.		max.		min.		max.		
°C	Joule	Ø	Nm**	Ø ⁽¹⁾⁽²⁾	Nm**	Ø	Nm**	Ø ⁽¹⁾⁽²⁾	Nm**	Ø	Nm**	Ø ⁽¹⁾	Nm**	Nm**	
M16x1,5 / M20x1,5	-20 - 70	< 7	5,5	1,5	7,0	1,0	7,0	1,5	9,0	1,4	9,5	1,0	13,0	1,7	3,3
	-40 - 70	< 4	5,5	1,5	7,0	1,0	7,0	1,5	9,0	1,4	9,5	1,0	11,0	1,7	3,3
M20x1,5 / M25x1,5	-20 - 70	< 7	8,0	1,5	10,0	2,0	10,0	2,3	13,0	2,6	13,5	1,3	17,5	2,3	2,7
	-40 - 70	< 4	8,0	1,5	10,0	2,0	10,0	2,3	13,0	2,6	13,5	1,5	15,0	2,3	2,7
M25x1,5 / M32x1,5	-55 - 70	< 7					14,0	3,0	17,0	4,0	17,5	1,5	21,0	1,3	3,0
M32x1,5 / M40x1,5	-55 - 70	< 7					19,0	3,3	22,0	5,5	22,0	3,3	28,0	6,7	5,0
M40x1,5 / M50x1,5	-55 - 70	< 7					24,0	6,0	28,0	7,0	28,0	5,0	35,0	7,0	7,5
M50x1,5 / M63x1,5	-55 - 70	< 7					29,0	12,0	35,0	12	36,0	12,0	41,0	13,0	7,5
additional seal							41,0	13,0	48,0	7,8					

** Test torques at 20°C

(1) The tests of clamping ranges and torque values were performed with metal mandrel. The clamping range can vary by using cables with different manufacturing tolerances and material properties. Please use the combination of sealing 1 + 2 + 3 for the intermediate region.

(2) When selecting the seal rubber, ensure that the cap nut can be tightened when carrying out any future maintenance work on the cable entry.

Dimension drawings and dimensions in mm

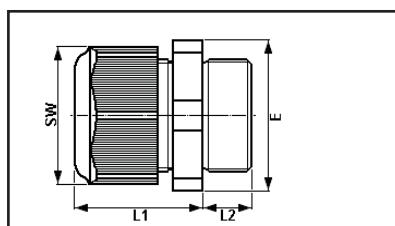
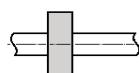


Fig. D/2 Seal insert



for gland for flat cables

1.4 Cable entries in special versions

Type	SW	L1	L2	E	weight app.
M20 with seal Ø 2 mm	24 mm	25,0 mm	13 / 8 mm	26,5 mm	10,1 g
M20 with slotted seal Ø 7,0- 13 mm	24 mm	25,0 mm	13 / 8 mm	26,5 mm	10,1 g
M25 flat cable	29 mm	29,5 mm	13 / 8 mm	32,0 mm	16,9 g
M25 with PG 16 thread	36 mm	35,5 mm	15 / 10 mm	40,0 mm	27,6 g

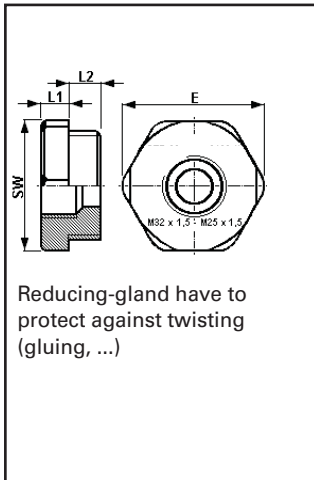
Type	Operating temperature	Impact resistant	Cable-diameter								Screw-in thread in enclosure
			Seal 1+2				Seal 2				
	°C	Joule	min. Ø	max. Nm**	min. Ø ⁽¹⁾⁽²⁾	max. Nm**	min. Ø	max. Nm**	min. Ø ⁽¹⁾⁽²⁾	max. Nm**	
M20 with seal Ø 2 mm	-20 - 60	< 7	2,0	3,5						2,7	
M20x1,5 with slotted seal Ø 7,0- 13 mm	-5 - 45		Breakout-Innenkabel Typ: orange								2,7
	-20 - 60		Ultra-Fox Plus Typ: 903 AG 621 02 709								2,7
	-20 - 60		Ehret / ICS 24 Typ: 84 305								2,7
M25x1,5 with PG 16 thread	-20 - 70	< 7	10,0	2,3	13,0	2,6	13,5	1,3	17,5	2,3	3,0
	-55 - 70	< 7	10,0	2,3	13,0	2,6	13,5	1,5	15,0	2,3	3,0
M25x1,5 flat cable	-55 - 70 (110)	< 7	G18 = 5-8x9-12,5 Flachkabel			5,0					3,0
M25x1,5 flat cable	-55 - 70 (110)	< 7	G24 / G26 = 6-8x11-14 Flachkabel			3,5					3,0
	Cable type		Seal dimensions				Cable dimensions				
M25 flat cable	Raychem XTV-4XTV 2 ...		8,0	x	11,0	mm	7,5	x	11,0	mm	3,0
M25 flat cable	Raychem VPL-5VPL 2 ...		8,0	x	11,0	mm	7,5	x	11,5	mm	3,0
M25 flat cable	Raychem BTV-3BTV 2 ...		8,0	x	11,0	mm	6,0	x	11,0	mm	3,0
M25 flat cable	Raychem QTV-10QTVR2		8,0	x	11,0	mm	5,0	x	12,5	mm	3,0
M25 flat cable Raychem	Raychem BTV-10BTV 2 ...		8,0	x	14,0	mm	6,0	x	14,0	mm	3,0
M25 flat cable	Raychem KTV-5KTV 2 ...		8,0	x	14,0	mm	7,5	x	13,5	mm	3,0

** Test torques at 20°C

(1) The tests of clamping ranges and torque values were performed with metal mandrel. The clamping range can vary by using cables with different manufacturing tolerances and material properties. Please use the combination of sealing 1 + 2 for the intermediate region.

(2) When selecting the seal rubber, ensure that the cap nut can be tightened when carrying out any future maintenance work on the cable entry.

Dimension drawings and dimensions in mm

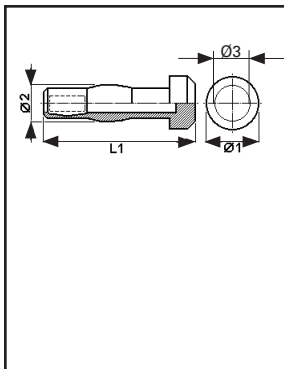


1.5 Reducing glands

Type	Operating temperature / °C	SW	L1	L2	E	Screw-in thread in enclosure / Nm	weight app.
M16x1,5 / M12x1,5	-55 - 70					3,3 Nm	
M20x1,5 / M12x1,5	-55 - 70	24 mm	6,0 mm	8 mm	26,5 mm	2,7 Nm	9,0 g
M20x1,5 / M16x1,5	-55 - 70	24 mm	6,0 mm	8 mm	26,5 mm	2,7 Nm	9,0 g
M25x1,5 / M12x1,5	-55 - 70	29 mm	6,0 mm	8 mm	32,0 mm	3,0 Nm	12,5 g
M25x1,5 / M16x1,5	-55 - 70	29 mm	6,0 mm	8 mm	32,0 mm	3,0 Nm	12,5 g
M25x1,5 / M20x1,5	-55 - 70	29 mm	6,0 mm	8 mm	32,0 mm	3,0 Nm	12,5 g
M32x1,5 / M12x1,5	-55 - 70	36 mm	6,0 mm	10 mm	40,0 mm	5,0 Nm	13,5 g
M32x1,5 / M16x1,5	-55 - 70	36 mm	6,0 mm	10 mm	40,0 mm	5,0 Nm	13,5 g
M32x1,5 / M20x1,5	-55 - 70	36 mm	6,0 mm	10 mm	40,0 mm	5,0 Nm	13,5 g
M32x1,5 / M25x1,5	-55 - 70	36 mm	6,0 mm	10 mm	40,0 mm	5,0 Nm	13,0 g
M40x1,5 / M16x1,5	-55 - 70	46 mm	6,0 mm	10 mm	50,5 mm	7,5 Nm	21,0 g
M40x1,5 / M20x1,5	-55 - 70	46 mm	6,0 mm	10 mm	50,5 mm	7,5 Nm	21,0 g
M40x1,5 / M25x1,5	-55 - 70	46 mm	6,0 mm	10 mm	50,5 mm	7,5 Nm	23,0 g
M40x1,5 / M32x1,5	-55 - 70	46 mm	6,0 mm	10 mm	50,5 mm	7,5 Nm	21,0 g
M50x1,5 / M20x1,5	-55 - 70	55 mm	6,0 mm	12 mm	60,0 mm	7,5 Nm	72,0 g
M50x1,5 / M25x1,5	-55 - 70	55 mm	6,0 mm	12 mm	60,0 mm	7,5 Nm	72,0 g
M50x1,5 / M32x1,5	-55 - 70	55 mm	6,0 mm	12 mm	60,0 mm	7,5 Nm	72,0 g
M50x1,5 / M40x1,5	-55 - 70	55 mm	6,0 mm	12 mm	60,0 mm	7,5 Nm	65,0 g
M63x1,5 / M25x1,5	-55 - 70	68 mm	6,0 mm	12 mm	75,0 mm	7,5 Nm	40,0 g
M63x1,5 / M32x1,5	-55 - 70	68 mm	6,0 mm	12 mm	75,0 mm	7,5 Nm	40,0 g
M63x1,5 / M40x1,5	-55 - 70	68 mm	6,0 mm	12 mm	75,0 mm	7,5 Nm	40,0 g
M63x1,5 / M50x1,5	-55 - 70	68 mm	6,0 mm	12 mm	75,0 mm	7,5 Nm	30,0 g

L1 = Screw-in thread in enclosure
L2 = Reducing thread

1.6 Blanking plug for multiple glands



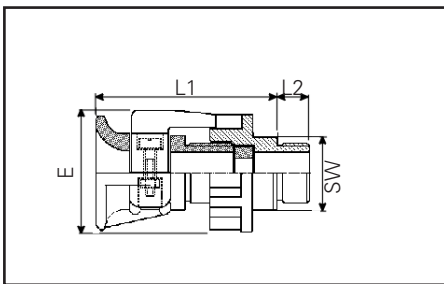
Type	Operating temperature / °C	Ø 1	Ø 2	L1	Ø 3	weight app.
M12x1,5*	-55 / +70	7,0 mm	6,0 mm	30,3 mm	5,0 mm	1,0 g
M16x1,5	-55 / +70	8,0 mm	7,0 mm	33,0 mm	6,0 mm	1,3 g
M20x1,5	-55 / +70	12,0 mm	8,5 mm	34,5 mm	7,0 mm	6,6 g
M25x1,5	-55 / +70	16,0 mm	11,0 mm	36,0 mm	10,0 mm	2,8 g
M32x1,5	-55 / +70	20,0 mm	14,0 mm	39,5 mm	13,0 mm	4,6 g
M40x1,5	-55 / +70	24,0 mm	20,0 mm	42,0 mm	19,0 mm	7,0 g
M50x1,5	-55 / +70	32,0 mm	26,0 mm	44,0 mm	25,0 mm	8,0 g
M63x1,5	-55 / +70	39,0 mm	34,0 mm	45,0 mm	32,0 mm	9,0 g

* for multiple glands M25x1,5 and M32x1,5

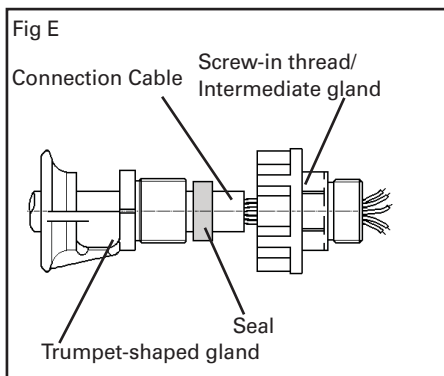
Cable entries, blanking plugs, screw plugs, trumpet-shaped cable glands, reducing glands and drain plugs

Dimension drawings and dimensions in mm 1.7 Trumpet-shaped glands M20 to M63

ATEX type examination certificate:	PTB 00 ATEX 3121	
Marking acc. to 2014/34/EU and standard:	EN 60079-0	
	⊕ II 2 G Ex e II	
	⊕ II 2 D Ex tD A21 IP66	
IECEX type examination certificate:	IECEX BK1 08.0007	
Category of application:	IEC60079-0	
	Ex e II	
	Ex tD A21 T85°C IP66	
Perm. storage temperature in original packing:	-20° C +40° C	
Degree of protection to IEC/EN 60529:	IP 66 (fully assembled)	

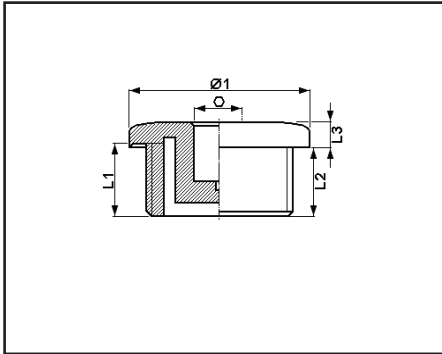


Type	SW	L1	L2	E width across corners	weight app.
M20x1.5	27 mm	64 mm	15 mm	47 mm	57 g
M25x1.5	32 mm	65 mm	15 mm	51 mm	68 g
M32x1.5	41 mm	80 mm	15 mm	68 mm	138 g
M40x1.5	50 mm	86 mm	15 mm	81 mm	191 g
M50x1.5	60 mm	95 mm	16 mm	96 mm	325 g
M63x1.5	75 mm	105 mm	16 mm	107 mm	757 g



Type	Operating temperature °C	Impact re- sistant Joule	Cable diameter		strain Relief (screws)		Screw- in thread Nm
			min. Ø	max. Ø	Nm	Nm	
			Trumpet-shaped gland				
M20x1,5	-40 - 85	< 7	8,0	13,0	3,0	1,5	3,5
M25x1,5	-40 - 85	< 7	11,0	16,0	3,0	2,0	4,0
M32x1,5	-40 - 85	< 7	15,0	20,0	6,0	4,0	7,5
M40x1,5	-40 - 85	< 7	19,0	27,0	10,0	6,0	12,0
M50x1,5	-40 - 85	< 7	26,0	34,0	30,0	10,0	35,0
M63x1,5	-40 - 85	< 7	35,0	46,0	40,0	15,0	45,0

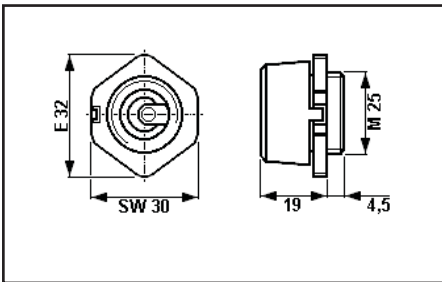
Dimension drawings and dimensions in mm

1.8 Screw plugs

ATEX type examination certificate:	PTB 98 ATEX 3130	
Marking acc. to 2014/34/EU and standard:	EN 60079-0	
	⊕ II 2 G Ex IIC Gb	
	⊕ II 2 D Ex tb IIIC Db IP66 (not for M63x1,5)	
IECEX type examination certificate::	IECEX PTB 03.0000	
Category of application:	IEC60079-0	
	Ex IIC Gb	(not for M63x1,5)
	Ex tb IIIC Db IP 66	(not for M63x1,5)
Perm. storage temperature in original packing:	-20° C +40° C	
Degree of protection to IEC/EN 60529:	(fully assembled)	
	M12- M50	IP 66
	M63	IP 54

Type	Operating temperature / °C	Ø 1	L1	L2	L3	Screw-in thread in enclosure / Nm	weight app.
M16x1,5	-55 / +95	21 mm	12 mm	11 mm	4,0 mm	3,3	2,4 g
M20x1,5	-55 / +95	25 mm	13 mm	12 mm	4,0 mm	2,7	4,3 g
M25x1,5	-55 / +95	30 mm	13 mm	12 mm	4,0 mm	3,0	6,6 g
M32x1,5	-55 / +95	37 mm	15 mm	14 mm	5,5 mm	5,0	12,0 g
M40x1,5	-55 / +95	45 mm	15 mm	14 mm	5,5 mm	7,5	36,6 g
M50x1,5	-55 / +95	55 mm	16 mm	15 mm	5,5 mm	7,5	56,6 g
M63x1,5	-20 / +80	72 mm	/mm	12 mm	11,0 mm	7,5	64,5 g

⊕ = Socket head spanner or screw driver, size 8 mm

1.9 Drain plug

ATEX type examination certificate:	PTB 01 ATEX 1128 X	
Marking acc. to 2014/34/EU and standard:	EN 60079-0	
	⊕ II 2 G Ex e II	
Permissible operating temperature range:	-20° C +40° C	
Perm. storage temperature in original packing:	-20° C +40° C	
Degree of protection to IEC/EN 60529:	IP 66 (fully assembled)	
Screw-in thread in enclosure:	M25x1,5	
Test torque:	5,0 Nm	

2 Legend

Caution

This symbol warns of a possible failure. Failure to observe this caution may result in the total failure of the device or the system or plant to which it is connected.



Special conditions:

This symbol indicates that special conditions apply for a safe operation in accordance with the EC Type Examination Certificate / IECEx Certificate of Conformity.

2.1 Safety instructions



The operations must be carried out by electrical suitably trained in hazardous area with knowledge of increased safety explosion protection IEC/EN 60079-14.

All the entries and components listed in these operating and mounting instructions are not suited for use in Zone 0 and Zone 20.

In addition, they may not be used as direct cable entries or seals for flameproof enclosures in potentially explosive atmospheres in Zone 1, Zone 2 and Zone 21, Zone 22.

They shall be used for their intended purpose and shall be in a perfect and clean state.

Prior to mounting, check the entries and components, as well as the screw-in threads of the apparatus into which they are to be mounted to ensure that they are in a perfect state.

The requirements of the IEC/EN 60079-0 and EN/IEC 60079-31 regarding excessive dust deposits and temperature to be considered from the user.

The national safety rules and regulations for the prevention of accidents, as well as the safety instructions included in these operating instructions, that, like this text, are set in italics, shall be observed!

3 Conformity with standards

They have been designed, manufactured and tested according to the state of the art and to DIN EN ISO 9001 and EN ISO/IEC 80079-34.

The apparatus are conform to the standards specified in the EC-Declaration of conformity, enclosed separately.

References to standards and directives in these operating instructions always relate to the latest version. Other additions (e.g. details relating to the year) shall be observed.

4 Field of application

The entries and components covered by these instructions (see Technical Data) are suited for mounting in potentially explosive atmospheres in Zone 1, Zone 2 and Zone 21, Zone 22 accordance with IEC/EN 60079-10-1 and IEC/EC 60079-10-2!

The materials used, including the exterior metal parts, are high quality materials that ensure a corrosion resistance and resistance to chemical substances according to the requirements for use in a "normal industrial atmosphere":


- impact resistant polyamide
- stainless steel

In case of use in an extremely aggressive atmosphere, please refer to manufacturer

5 Application / Properties

All the cable entries and components covered by these operating and mounting instructions are suited for use in enclosures and apparatus in the type of protection "Increased Safety".

Trumpet-shaped cable glands are used for feeding flexible cables into enclosures and apparatus.


 The fitting of seal inserts one inside the other or the interchanging of seal inserts of different entries to reduce the cable opening is not permitted.

Reducing glands can be used to reduce the size of threaded or through holes in enclosures to a smaller thread size.


Blanking plugs are used to seal metric COOPER CROUSE-HINDS cable entries and COOPER CROUSE-HINDS multiple entries.


Screw glands are used to seal unused through and threaded holes.

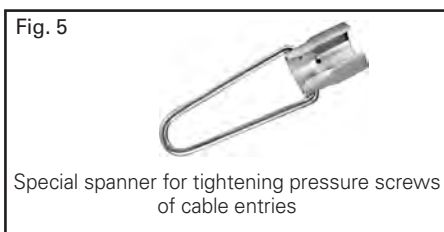
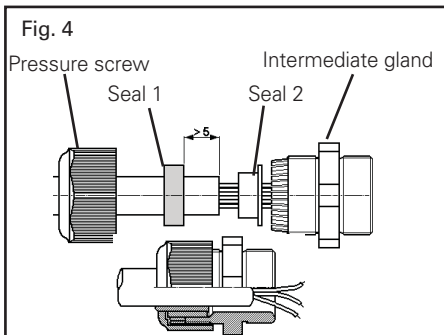
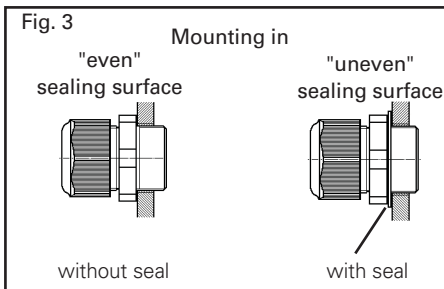
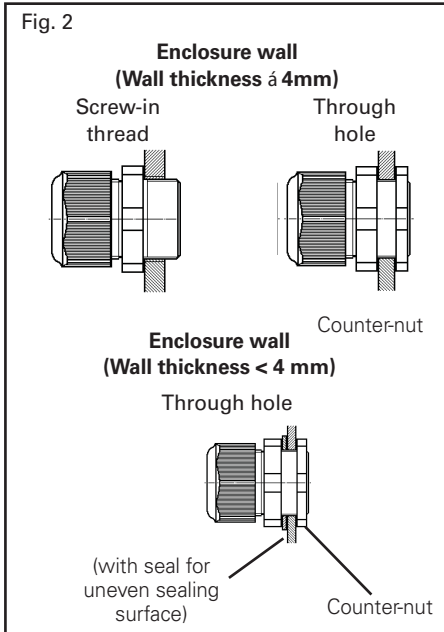
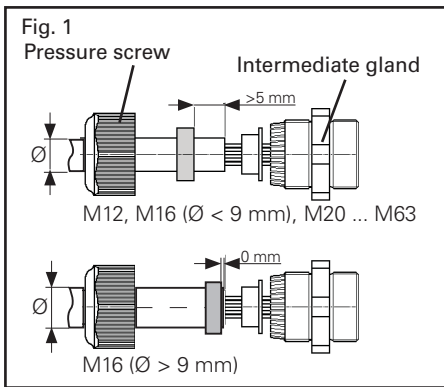
Any condensation in the apparatus can escape via drain plugs (see 6.1, Mounting).

 Applications other than those described are not permissible without a written declaration of consent from Messrs. COOPER CROUSE-HINDS.

 The instructions according to section 7 of the operating instructions shall be observed during operation.

 The sole responsibility with respect to the suitability and proper use of these entry components with regard to the basic conditions of these instructions (see Technical Data) lies with the operator.

 The EC-Type Examination Certificate and any future supplements thereto shall, at the same time, be regarded as supplements to the EC-Type Examination Certificates PTB 99 ATEX 3128 X and PTB 99 ATEX 3101 X.



6 Installation

The relevant national regulations and the generally recognized rules of engineering apply for the installation and operation. (IEC/EN 60079-14).

⚠ The improper installation and operation of enclosures can result in the invalidation of the guarantee.

⚠ Observe the special operational conditions accordance to IEC/EN 60069-14.

⚠ Only fixed cables may be used. The operator shall ensure that an appropriate strain relief is provided. This is not required for trumpet-shaped glands.

⚠ The degree of protection IP66 is only attained if the seals and cable entries are installed correctly.

⚠ Cable entries that are only suited for a low impact energy shall be built into an enclosure in such a way as to protect them from a mechanical impact energy.

6.1 Mounting

⚠ Prior to mounting, ensure that the threads of the entry components match the threads of the apparatus or enclosure.

⚠ If the entries and components are to be screwed directly into the walls, the wall thickness of the apparatus shall be at least 4 mm.

⚠ Counter-nuts shall be used if enclosure walls are less than 4 mm thick. The minimum thickness of the enclosure wall shall be 1.5 mm.

⚠ The use of entry elements with damaged or dirty threads can impair the IP degree of protection.

⚠ Imported Cables and wiring shall be relieved of tensile forces (eg with a cable clamp).

6.1.1 Cable entries (KLE)

The intermediate gland (see Fig. 1) of the cable entries shall be fitted with a suitable tool, e.g. fork, ring or box spanner.

It is mounted directly in the threaded hole or via the through hole of the enclosure (see Fig. 2).

If the sealing surfaces are uneven, seals shall be used between the enclosure wall and the intermediate gland (see Fig. 3).

Counter-nuts shall be used for walls with a thickness of less than 4 mm (see Fig. 2).

Cables are fed in as shown in Fig. 4.

The seal inserts shall be chosen to suit the respective cable diameter (Page 13 Figs. A, B, C and D).

Use COOPER CROUSE-HINDS spanners with a side opening can be used to facilitate the tightening of the pressure screw when the cable entry has been mounted (see Fig. 5).

Order No. GHG 960 1951 R0001 for Set 1 (M12, 16, 20, 25, 32 and 40)

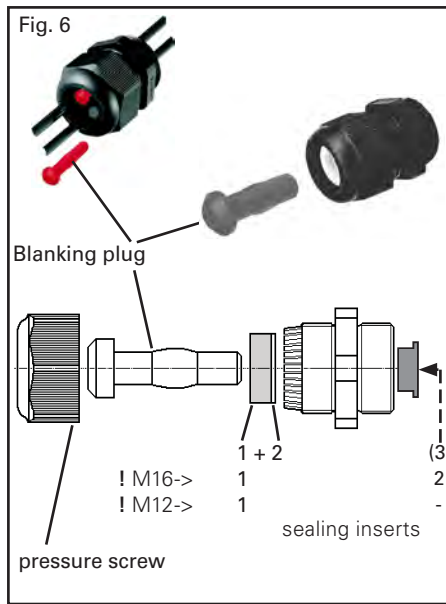
Order No. GHG 960 1951 R0002 for Set 2 (M50 and M63)

To ensure the required minimum degree of protection, the gland body and the pressure cap shall be tightened with the given test torques (see Technical Data).

When tightening the pressure cap, the gland body shall be prevented from turning with a suitable tool, e.g. a spanner.

⚠ Overtightening can impair the degree of protection.

Optionally, cable entries with colour-coded (light blue) pressure screws can be used for intrinsically safe circuits (see main COOPER CROUSE-HINDS catalogue for order numbers).

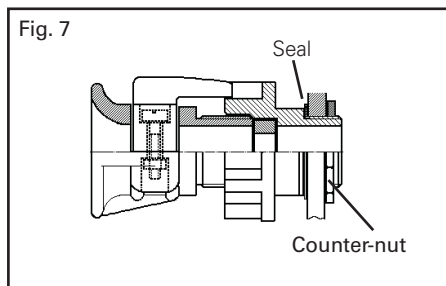


6.1.2 Blanking plugs

⚠ Blanking plugs of the types GGH 960 6107 P**** or GHG 960 1944 R**** may only be used in conjunction with cable entries of the types GHG 960 92** P**** or GHG 960 19** R****.

The following shall be observed when mounting blanking plugs for COOPER CROUSE-HINDS metric cable entries (see Fig. 6):

1. Only the blanking plug associated to the KLE shall be used.
2. When closing the gland with a blanking plug, always use sealing inserts 1+2!
3. The head of the blanking plug shall, as shown in Fig. 6, be on the outside.
4. The blanking plug shall be pushed into the KLE until it reaches the stop.
5. The pressure screw of the KLE shall be tightened down as described in 6.1.1.



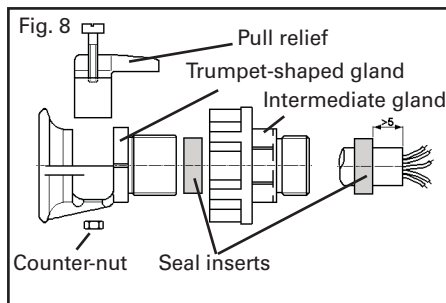
6.1.3 Screw plug

The screw plug shall be screwed tightly into the threaded hole in the enclosure using a suitable tool, e.g. 8 mm socket head spanner or a suitable screw driver.

A counter-nut shall be used for through holes or enclosures that are less than 4 mm thick.

An additional seal shall be used for uneven sealing surfaces.

⚠ In general, the M50 screw plug shall be mounted together with the seal supplied.



6.1.4 Trumpet-shaped gland

A suitable tool, e.g. a fork spanner, shall be used for mounting the intermediate gland in the trumpet-shaped gland in such a way that it cannot twist.

It is necessary to ensure that the gland cannot twist once the cable has been fed in and the trumpet-shaped gland mounted (e.g. by using a counter-nut, see Figs. 7 + 8). A counter-nut shall be used for through holes or enclosures that are less than 4 mm thick. When mounting, a seal shall always be used between the enclosure wall and intermediate gland (see Fig. 7).

The following describes the mounting of the cable in the trumpet-shaped gland, as shown in Fig. 8:

1. Cut out the individual rings of the "onion ring" seal insert to match the respective cable diameter.
2. After feeding in the cable, that has been cut to length and has the seal mounted, into the intermediate gland, screw the trumpet-shaped gland tightly into the intermediate gland to seal off the cable.
3. Then mount the pull relief on the trumpet-shaped gland.

⚠ It is necessary to ensure that there is sufficient pull relief, that damage to the cable is not possible and that the trumpet-shaped gland cannot twist.

6.1.5 Reducing gland

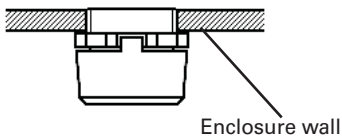
A suitable tool, e.g. a fork, ring or box spanner, shall be used for screwing the reducing gland tightly into the threaded hole in the enclosure.

A counter-nut shall be used for through holes or enclosures that are less than 4 mm thick.

An additional seal shall be used for uneven sealing surfaces.

⚠ Screwing several reducing glands one inside the other to reduce the size of the entry thread is not permitted.

Fig. 9



6.1.6 Drain plug

A suitable tool, e.g. a fork, ring or box spanner, shall be used for screwing the drain plug tightly into the threaded hole in the enclosure.

An additional seal shall be used for uneven sealing surfaces.

The drain plug shall be mounted at the lowest point of the apparatus or enclosure (see Fig. 9).

⚠ The minimum wall thickness may not be less than 4 mm.

Entry components shall be screwed in tightly to ensure the specified minimum degree of protection (see Technical Data for test torques).

⚠ Overtightening can impair the degree of protection.

6.2 Putting into operation

Prior to putting the mounted entry components into operation, the tests specified in the individual national regulations shall be performed.

In addition to this, prior to putting the entries into operation, the correct mounting shall be checked in accordance with these operating and mounting instructions and any other applicable regulations.

⚠ In locations where they are particularly at risk, the entries shall be safeguarded against being torn out of the apparatus or enclosure walls by external mechanical influences (e.g. by fork lift trucks, by knocking or similar).

7 Maintenance / Servicing

⚠ The valid national regulations for the servicing / maintenance of electrical apparatus for use in potentially explosive atmospheres shall be observed (e.g. IEC/EN 60079-17).

The necessary intervals between servicing depend upon the specific application and shall be stipulated by the operator according to the respective operating conditions.

As part of the routine testing, above all, parts on which the explosion protection depends shall be checked (e.g. intactness of entry components and seals).

Pressure screws of cable entries, trumpet-shaped glands of trumpet-shaped cable entries shall be checked at regular intervals to ensure that they are screwed in tightly and, if necessary, they shall be tightened down.

If, in the course of servicing, it is ascertained, that repairs are necessary, section 8 of these operating instructions shall be observed.

8 Repairs / Modifications

Only original COOPER CROUSE-HINDS parts shall be used for carrying out repairs that concern the explosion protection.

⚠ Repairs that affect the explosion protection may only be carried out by COOPER CROUSE-HINDS or by a qualified electrician in compliance with the respective national regulations (e.g. IEC/EN 60079-19).

Modifications to the entry components are not permitted.

9 Disposal / Recycling

The respective valid national regulations for waste disposal shall be observed when disposing of apparatus.

To facilitate recycling of individual parts, parts made of moulded plastic bear the marking for the type of plastic used.

The product range is subject to changes and additions.



IPC

TŁUMACZENIE ORYGINALNEJ INSTRUKCJI

ELEKTRYCZNY ODKURZACZ
PRZEMYSŁOWY, ANTYSTATYCZNY,
UZIEMIONY
DO CZYSZCZENIA NA SUCHO

MODEL: PLANET 22 S ATEX

KLASA PYŁÓW "H"

CE  II 3 D

Ex h tc IIIC T200°C Dc IP6X

IP Cleaning S.r.l.
via E.Fermi,2
CASTELVERDE (CR) - WŁOCHY
<http://www.ipcworldwide.com>

**PRZED ROZPOCZĘCIEM OBSŁUGI, CZYSZCZENIA LUB
SERWISOWANIA NALEŻY PRZECZYTAĆ WSZYSTKIE
INSTRUKCJE
WAŻNE - NALEŻY ZACHOWAĆ NINIEJSZĄ INSTRUKCJĘ**

Spis treści

1.0 KONTROLA	3
2.0 ZASTOSOWANIE	3
3.0 WAŻNE ZASADY BEZPIECZEŃSTWA	5
3.1. WLOT POWIETRZA CHŁODZĄCEGO	5
3.2. KONTROLKA ZAPCHANIA FILTRA	6
3.3. WARSTWY PYŁU	6
3.4. GRANICA TEMPERATURY	6
3.5. PALĄCY SIĘ MATERIAŁ	6
3.6. ŁATWOPALNE CIECZE	7
3.7. PYŁY PRZEWODZĄCE ŁADUNKI I PYŁY METALI	7
3.8. SAMOZAPŁON PYŁÓW	7
3.9. ISKRZENIE WYTWARZANE MECHANICZNIE	7
3.10 WAŻNE ZASADY BEZPIECZEŃSTWA W ODNIESIENIU DO WYTWARZANIA ŁADUNKÓW ELEKTROSTATYCZNYCH	7
4.0 INSTRUKCJE PRZED UŻYCIEM I WAŻNE ZASADY BEZPIECZEŃSTWA	8
5.0 ŚRODKI OSTROŻNOŚCI W ZAKRESIE ODZYSKIWANIA MATERIAŁÓW NIEBEZPIECZNYCH	10
6.0 INSTRUKCJA UZIEMIENIA	11
7.0 TESTOWANIE CIĄGŁOŚCI UZIEMIENIA	12
8.0 SYSTEM FILTRACJI	13
9.0 INSTRUKCJE ODKURZANIA NA SUCHO	14
10.0 CZYSZCZENIE I KONSERWACJA	15
11.0 MONTAŻ I WYMIANA FILTRÓW HEPA	16
11.1. WYMIANA FILTRA HEPA DO WLOTU POWIETRZA CHŁODZĄCEGO DO SILNIKA	17
11.2. WYMIANA FILTRA HEPA DO WYLOTU POWIETRZA CHŁODZĄCEGO Z SILNIKA	17
11.3. WYMIANA FILTRA HEPA DO WYLOTU POWIETRZA ROBOCZEGO	18
11.4. WYMIANA FILTRA HEPA DO WLOTU POWIETRZA ROBOCZEGO	18
12.0 PRZECHOWYWANIE	19
13.0 SPECYFIKACJE TECHNICZNE	19
14.0 ROZWIĄZYWANIE PROBLEMÓW:	20
15.0 ZAŁĄCZNIKI	20
16.0 DEKLARACJA ZGODNOŚCI UE	21

1.0 KONTROLA

Należy ostrożnie rozpakować i skontrolować, czy odkurzacz IPCLEANING nie uległ uszkodzeniom podczas transportu. Każdy odkurzacz jest testowany i poddawany dokładnej kontroli przed wysyłką, dlatego za wszelkie szkody odpowiada przewoźnik dostarczający urządzenie, który powinien zostać o nich powiadomiony.

2.0 ZASTOSOWANIE

OSTRZEŻENIE: Użytkownik powinien dokonać oceny ryzyka pod kątem usuwania pyłów w strefach niebezpiecznych. Zalecenia zamieszczone w niniejszej instrukcji nie mogą w żadnym wypadku zastąpić wniosków wynikających z oceny ryzyka.

Urządzenie IPCLEANING PLANET 22 S ATEX to elektryczny odkurzacz przemysłowy, antystatyczny i uziemiony, przeznaczony do usuwania pyłów w miejscach, w których mogą wystąpić atmosfery wybuchowe, klasyfikowanych jako strefa ATEX 22.

Odkurzacze PLANET 22 S ATEX są certyfikowane zgodnie z dyrektywą 2014/34/UE w odniesieniu do grupy urządzeń II, kategorii urządzeń 3. Na odkurzaczach znajduje się następujące oznaczenie:

  II 3 D
Ex h tc IIIC T200°C Dc IP6X

Urządzenia te zostały poddane wewnętrznej kontroli produkcji zgodnie z dyrektywą 2014/34/UE. Wyniki badań i testów zostały zapisane w poufnym raporcie.

OSTRZEŻENIE: NINIEJSZY ODKURZACZ NIE ZOSTAŁ ZAPROJEKTOWANY DO UŻYCIA W STREFACH ZAGROŻENIA 20 LUB 21. NIE UŻYWAĆ TEGO ODKURZACZA W STREFACH ZAGROŻENIA 20 LUB 21.

OSTRZEŻENIE: Ten odkurzacz został zaprojektowany do usuwania wyłącznie suchych materiałów. Nie używać do cieczy.

OSTRZEŻENIE: Z tym odkurzaczem należy używać wyłącznie narzędzi i akcesoriów dostarczonych przez producenta. Używanie innych narzędzi i akcesoriów może negatywnie wpłynąć na bezpieczeństwo.

2.1. ZASTOSOWANIE W STREFACH ZAGROŻONYCH WYBUCEM W OBECNOŚCI ŁATWOPALNYCH GAZÓW, OPARÓW LUB CIECZY

OSTRZEŻENIE: TEN ODKURZACZ NIE ZOSTAŁ ZAPROJEKTOWANY DO UŻYTKU W STREFACH ZAGROŻENIA, W KTÓRYCH WYSTĘPUJĄ ŁATWOPALNE GAZY, OPARY LUB CIECZE. NIE UŻYWAĆ TEGO ODKURZACZA W STREFACH ZAGROŻENIA, W KTÓRYCH WYSTĘPUJĄ ŁATWOPALNE GAZY, OPARY LUB CIECZE.

2.2. ZASTOSOWANIE W STREFACH ZAGROŻONYCH WYBUCEM W OBECNOŚCI PALNYCH PYŁÓW

Urządzenia z serii PLANET 22 S ATEX to elektryczne odkurzacze przemysłowe, antystatyczne i uziemione, zaprojektowane i certyfikowane do użycia w przestrzeni klasyfikowanej jako **strefa ATEX 22**, w której atmosfera wybuchowa w postaci obłoku palnego pyłu w powietrzu nie występuje w trakcie normalnego działania, a w przypadku wystąpienia, utrzymuje się przez krótki okres.

Model PLANET 22 S ATEX może być użyty do usuwania:

- palnych unoszących się cząstek,
- palnych pyłów węglowych (sadza, węgiel drzewny, pyły węglowe lub koksowe),
- mąki, ziarna, drewna, tworzyw sztucznych i substancji chemicznych,
- **maksymalnie 2 kg (5 funtów) pyłów przewodzących ładunki lub pyłów metali.**

OSTRZEŻENIE: W celu usunięcia pyłów przewodzących ładunki lub pyłów metali, których ilość przekracza 2 kg (5 funtów), zalecamy użycie opcjonalnego separatora wodnego przechwytyjącego pyły w kąpeli wodnej.

OSTRZEŻENIE: NIE USUWAĆ ŻARZĄCYCH SIĘ WĘGLI ANI ZAPALONYCH PYŁÓW.

3.0 WAŻNE ZASADY BEZPIECZEŃSTWA

3.1. WLOT POWIETRZA CHŁODZĄCEGO

OSTRZEŻENIE: NIE OWIJAĆ KABLA ELEKTRYCZNEGO WOKÓŁ WLOTU POWIETRZA CHŁODZĄCEGO DO SILNIKA ANI NIE ZASŁANIAĆ TEGO WLOTU W ŻADEN SPOSÓB PODCZAS PRACY. UNIEMOŻLIWIŁOBY TO DOPŁYW POWIETRZA CHŁODZĄCEGO DO SILNIKA, CO DOPROWADZIŁOBY DO WZROSTU JEGO TEMPERATURY I W KONSEKWENCJI ZATRZYMANIA ODKURZACZA.



Podczas pracy wlot powietrza chłodzącego do silnika nie może być zatkany.

3.2. KONTROLKA ZAPCHANIA FILTRA

Na odkurzaczu jest zainstalowana kontrolka zapchania filtra. Kontrolka włącza się w przypadku zaniku ssania. W takim przypadku worek może być pełny, może okazać się konieczne wypranie filtrów tkaninowych (filtr główny i filtr bezpieczeństwa) lub wymiana filtrów HEPA.

OSTRZEŻENIE: Gdy zaświeci się kontrolka zapchania filtra, należy jak najszybciej wyłączyć odkurzacza, ponieważ niedrożność filtra powoduje wzrost temperatury wewnątrz urządzenia i może doprowadzić do uszkodzenia silnika.

Informacje dotyczące konserwacji podano w rozdziałach „Czyszczenie i konserwacja” oraz „Montaż i wymiana filtrów HEPA”.

3.3. WARSTWY PYŁU

OSTRZEŻENIE: Należy regularnie czyścić powierzchnie odkurzacza zwilżoną wodą szmatką, aby uniknąć gromadzenia się złożeń pyłu, które mogą stać się źródłem zapłonu.

3.4. GRANICA TEMPERATURY

W przypadku występowania obłoku pyłu

OSTRZEŻENIE: Maksymalna temperatura powierzchni odkurzacza wynosi 200°C. Urządzenia **nie wolno używać w przypadku występowania obłoku pyłu, którego minimalna temperatura zapłonu jest niższa niż 300°C.**

W przypadku występowania warstw pyłu

OSTRZEŻENIE: Maksymalna temperatura powierzchni odkurzacza wynosi 200°C. Urządzenia **nie wolno używać w przypadku występowania 5 mm warstwy pyłu, którego minimalna temperatura zapłonu jest niższa niż 275°C.**

3.5. PALĄCY SIĘ MATERIAŁ

OSTRZEŻENIE: **NIE ZBIERAĆ MATERIAŁÓW PALĄCYCH LUB DYMIĄCYCH SIĘ, TAKICH JAK GORĄCY POPIÓŁ, PAPIEROSY, ZAPAŁKI CZY ŻARZĄCE SIĘ WĘGLE.**

3.6. ŁATWOPALNE CIECZE

OSTRZEŻENIE: ODKURZACZ NIE ZOSTAŁ ZAPROJEKTOWANY DO USUWANIA ŁATWOPALNYCH CIECZY. NIE UŻYWAĆ ODKURZACZA DO ZBIERANIA ŁATWOPALNYCH CIECZY.

3.7. PYŁY PRZEWODZĄCE ŁADUNKI I PYŁY METALI

OSTRZEŻENIE: W celu usunięcia pyłów przewodzących ładunki lub pyłów metali, których ilość przekracza 2 kg (5 funtów), zalecamy użycie opcjonalnego separatora wodnego przechwytyjącego pyły w kąpeli wodnej.

3.8. SAMOZAPŁON PYŁÓW

OSTRZEŻENIE: NIE UŻYWAĆ ODKURZACZA DO USUWANIA PYŁU ANI MIESZANINY PYŁÓW, KTÓRE MOGĄ ULEC SAMOZAPŁONOWI.

3.9. WAŻNE ZASADY BEZPIECZEŃSTWA W ODNIESIENIU DO WYTWARZANIA ŁADUNKÓW ELEKTROSTATYCZNYCH

Podczas użytkowania odkurzacza zgodnie z zaleceniami zawartymi w niniejszej instrukcji stwierdzono, że nie może dojść do znaczącego lub ciągłego gromadzenia się ładunków elektrostatycznych, które mogłyby stanowić potencjalne źródło zapłonu.

Niemniej jednak w celu zapewnienia bezpiecznego użytkowania zalecamy, aby na zamontowanych na odkurzaczu elementach izolacyjnych nie wykonywać żadnych czynności, takich jak ciągłe i intensywne pocieranie ręczne, które mogłyby prowadzić do znaczącego gromadzenia się ładunków elektrostatycznych.

Powyższych instrukcji należy przestrzegać w szczególności w odniesieniu do plastikowych osłon kół.

4.0 INSTRUKCJE PRZED UŻYCIEM I WAŻNE ZASADY BEZPIECZEŃSTWA

OSTRZEŻENIE: Odkurzacz musi być odpowiednio uziemiony. **NIE UŻYWAĆ URZĄDZENIA BEZ STOSOWNEGO ŹRÓDŁA UZIEMIENIA.**

OSTRZEŻENIE: Odkurzacz jest w całości uziemiony i zawiera specjalne materiały antystatyczne. Należy używać wyłącznie oryginalnych części zamiennych dostarczonych przez producenta lub jednego z autoryzowanych dystrybutorów.

OSTRZEŻENIE: Odkurzacz jest dostarczany bez wtyczki elektrycznej. Użytkownik jest odpowiedzialny za zainstalowanie odpowiedniej wtyczki, certyfikowanej pod kątem klasyfikacji strefy zagrożenia.

OSTRZEŻENIE: Wtyczkę powinien zainstalować tylko wykwalifikowany elektryk. Wtyczkę należy przyłączyć do odpowiedniego gniazdka, które jest prawidłowo zainstalowane i uziemione zgodnie ze wszystkimi lokalnymi przepisami i rozporządzeniami.

OSTRZEŻENIE: Urządzenie przeznaczone jest wyłącznie do użytku na sucho i nie można go używać ani przechowywać na zewnątrz w wilgotnych warunkach.

OSTRZEŻENIE: Przed użyciem operatorzy powinni otrzymać informacje, instrukcje i szkolenie z zakresu użytkowania urządzenia oraz substancji, do których ma ono być używane, w tym bezpiecznego sposobu usuwania i utylizacji zebranego materiału.

OSTRZEŻENIE: W przypadku serwisowania przez użytkownika, maszynę należy rozmontować, oczyścić i poddać serwisowaniu, w takim zakresie, w jakim jest to uzasadnione względami praktycznymi, bez stwarzania zagrożenia dla konserwatorów i innych osób. Stosowne środki ostrożności obejmują oczyszczenie przed demontażem, zapewnienie lokalnej wentylacji wyciągowej z filtracją w miejscu demontażu maszyny, oczyszczenie obszaru konserwacji i odpowiednie środki ochrony indywidualnej.

OSTRZEŻENIE: Producent lub osoba przeszkolona co najmniej raz w roku powinna przeprowadzić przegląd techniczny, polegający na przykład na kontroli filtrów pod kątem uszkodzeń, szczelności maszyny i prawidłowego działania mechanizmu sterującego. Ponadto w przypadku maszyn klasy H należy przetestować wydajność filtracji co najmniej raz w roku lub częściej, zgodnie z wymogami krajowymi.

OSTRZEŻENIE: Zewnętrzną część maszyny należy oczyścić odkurzaczem, a następnie wytrzeć do sucha lub nanieść szczeliwo przed wyniesieniem ze strefy zagrożenia. Wszystkie części maszyny są uważane za zanieczyszczone po usunięciu ich ze strefy zagrożenia i należy podjąć odpowiednie działania zapobiegające rozpraszaniu się pyłu.

OSTRZEŻENIE: Urządzenie nie jest przeznaczone do zbierania pyłów lub cieczy stwarzających duże zagrożenie wybuchem, ani mieszanin palnych pyłów z cieciami.

OSTRZEŻENIE: Niewłaściwe użycie odkurzacza skutkuje unieważnieniem gwarancji.

- a. Przed użyciem należy odnieść się do krajowych norm elektrycznych i właściwych organów. Należy upewnić się, że instalacja elektryczna jest zgodna z napięciem podanym na tabliczce znamionowej.
- b. Przed każdym użyciem należy sprawdzić, czy kabel zasilający odkurzacza nie jest uszkodzony (pęknięcia, starzenie). W razie stwierdzenia uszkodzeń, należy zwrócić się do producenta w sprawie serwisu. Należy używać wyłącznie kabla dostarczonego z urządzeniem lub zakupionego od producenta.
- c. Nie należy ciągnąć odkurzacza za kabel zasilający.
- d. Przed serwisowaniem lub odłożeniem odkurzacza na miejsce należy go wyłączyć i wyciągnąć wtyczkę kabel zasilającego. Odkurzacza można czyścić i serwisować **tylko w STREFACH NIEZAGROŻONYCH WYBUCHEM.**
- e. Odkurzacza został zaprojektowany tylko do użytku w pomieszczeniach.
- f. Przed użyciem odkurzacza zbiornik musi być czysty i suchy.
- g. Urządzenia można używać tylko wtedy, gdy wszystkie filtry są na miejscu i nie są uszkodzone. (Patrz podrozdział dotyczący systemu filtracji).
- h. Urządzenie należy przyłączyć tylko do prawidłowo uziemionego gniazdka. Patrz: Instrukcja uziemienia.
- i. Należy używać wyłącznie odpowiednich przedłużaczy ATEX zgodnie z oceną ryzyka dokonaną przez użytkownika końcowego.
- j. W przypadku pyłów o energii zapłonu mniejszej niż 1mJ mogą mieć zastosowanie dodatkowe ograniczenia ze strony urzędów ds. pracy.

5.0 ŚRODKI OSTROŻNOŚCI W ZAKRESIE ODZYSKIWANIA MATERIAŁÓW NIEBEZPIECZNYCH

OSTRZEŻENIE: Model PLANET 22 S ATEX (niewyposażony w filtr HEPA) nie jest odpowiedni do usuwania materiałów niebezpiecznych.

NIEBEZPIECZEŃSTWO: Jeśli odkurzacz używany jest do usuwania toksycznych lub szkodliwych materiałów, należy podjąć następujące środki ostrożności:

- a. Odkurzacz musi być wyposażony w filtr HEPA.
- b. Tylko przeszkoleni pracownicy mogą serwisować i obsługiwać odkurzacz.
- c. Podczas obsługi i serwisowania odkurzacza należy nosić stosowną odzież i środki ochrony indywidualnej.
- d. Zebrane materiały należy utylizować w sposób odpowiedzialny. Należy przestrzegać regulacji rządowych w zakresie utylizacji materiałów niebezpiecznych.

OSTRZEŻENIE: Urządzenie zawiera pył niebezpieczny dla zdrowia. Tylko upoważnieni pracownicy noszący środki ochrony indywidualnej mogą wykonywać czynności związane z opróżnianiem i konserwacją, łącznie z usuwaniem worków na pył. Nie używać urządzenia bez zamontowanego pełnego systemu filtracji.

UWAGA: Zagrożenia dla zdrowia związane z użyciem tego odkurzacza do usuwania azbestu i innych niebezpiecznych substancji nie zostały zbadane.

6.0 INSTRUKCJA UZIEMIENIA

Odkurzacz musi być prawidłowo uziemiony. W przypadku wadliwego działania lub awarii, uziemienie zapewnia ścieżkę najmniejszej rezystancji dla prądu elektrycznego, aby zmniejszyć ryzyko porażenia prądem. Odkurzacz wyposażono w przewód z żyłą ochronną uziemającą. Odkurzacz jest dostarczany bez wtyczki elektrycznej. Użytkownik jest odpowiedzialny za zainstalowanie odpowiedniej wtyczki, certyfikowanej pod kątem klasyfikacji strefy niebezpiecznej.

Wtyczkę powinien zainstalować tylko wykwalifikowany elektryk. Wtyczkę należy przyłączyć do odpowiedniego gniazdka, które jest prawidłowo zainstalowane i uziemione zgodnie ze wszystkimi lokalnymi przepisami i rozporządzeniami. Należy upewnić się, że bezpiecznik/wyłącznik na tablicy rozdzielczej ma odpowiednią wartość znamionową i przekracza maksymalny prąd znamionowy podany na naklejce z danymi technicznymi odkurzacza. Przed każdym użyciem należy przetestować ciągłość elektryczną odkurzacza. (Patrz rozdział 6 „Testowanie ciągłości uziemienia”).

OSTRZEŻENIE: Odkurzacz przeznaczony do miejsc niebezpiecznych jest wyposażony w kółka wykonane z materiału przewodzącego, które zapewniają uziemienie urządzenia. Nie wymieniać kółek wykonanych z materiału przewodzącego i stosować tylko odpowiednie kółka dostarczone przez producenta.

OSTRZEŻENIE: Niewłaściwe przyłączenie przewodu uziemiającego urządzenia może stworzyć ryzyko porażenia prądem elektrycznym. W razie wątpliwości należy skontaktować się z wykwalifikowanym elektrykiem lub serwisantem w celu sprawdzenia, czy gniazdko jest prawidłowo uziemione. Jeśli wtyczka nie pasuje do gniazdka, należy zlecić wykwalifikowanemu elektrykowi zainstalowanie odpowiedniej wtyczki lub gniazdka. Nie należy używać żadnych adapterów do odkurzacza.

OSTRZEŻENIE: Aby skutecznie rozpraszać ładunki elektrostatyczne i zapewnić beziskrowe działanie, odkurzacz musi być uziemiony podczas użytkowania.

NIEBEZPIECZEŃSTWO: Nie używać odkurzacza, jeśli gniazdo elektryczne nie jest odpowiednio uziemione lub jeśli uziemienie jest wątpliwe.

7.0 TESTOWANIE CIĄGŁOŚCI UZIEMIENIA

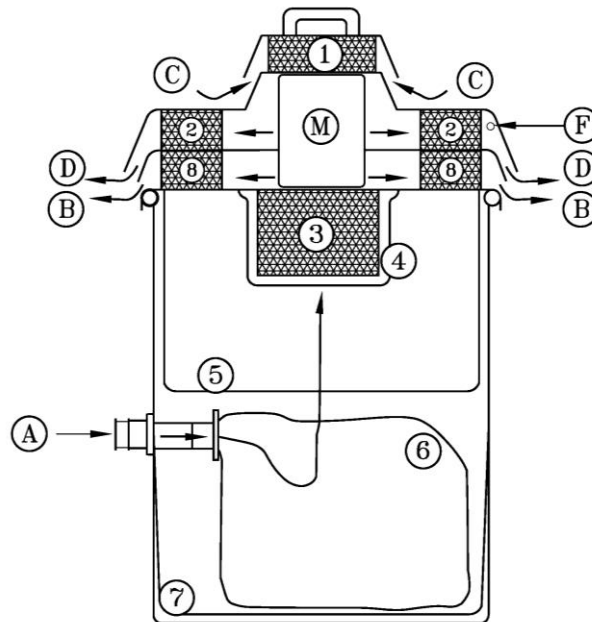
OSTRZEŻENIE: Przed każdym użyciem należy przetestować ciągłość elektryczną odkurzacza. Zapewni to odprowadzenie do ziemi wszelkich ładunków elektrostatycznych powstających podczas odkurzania.

OSTRZEŻENIE: Należy używać wyłącznie oryginalnych części zamiennych dostarczonych przez producenta lub jednego z autoryzowanych dystrybutorów.

Do przeprowadzenia testu ciągłości elektrycznej konieczny jest omomierz.

- a. Odłączyć kabel zasilający od gniazdka.
- b. Upewnić się, że zatrzaski na odkurzaczu są zamknięte i że usuwalny zbiornik jest prawidłowo zainstalowany w urządzeniu.
- c. Odłączyć wąż ssący od odkurzacza.
- d. Za pomocą omomierza należy sprawdzić ciągłość elektryczną odkurzacza od bolca uziemiającego na końcu kabla zasilającego do wlotu ssącego odkurzacza. Odczyt na poziomie 10^9 omów lub niższy, jest wystarczający, aby zapewnić właściwe uziemienie i rozproszenie ładunków elektrostatycznych.
- e. Za pomocą omomierza należy sprawdzić ciągłość elektryczną węża ssącego pomiędzy jego krańcami. Odczyt na poziomie 10^9 omów lub niższy, jest wystarczający, aby zapewnić właściwe uziemienie i rozproszenie ładunków elektrostatycznych.

8.0 SYSTEM FILTRACJI



Rys. 1

- 1 FILTR ABSOLUTNY HEPA DO WLOTU POWIETRZA CHŁODZĄCEGO DO SILNIKA
(Skuteczność > 99,995% przy 0,3 mikrona)
 - 2 FILTR ABSOLUTNY HEPA DO WYLOTU POWIETRZA CHŁODZĄCEGO Z SILNIKA
(Skuteczność > 99,995% przy 0,3 mikrona)
 - 3 FILTR ABSOLUTNY HEPA DO WLOTU POWIETRZA ROBOCZEGO
(Skuteczność > 99,995% przy 0,3 mikrona)
 - 4 FILTR BEZPIECZEŃSTWA (ANTYSTATYCZNY)
 - 5 GŁÓWNY FILTR TKANINOWY (ANTYSTATYCZNY)
 - 6 WOREK (ANTYSTATYCZNY)
 - 7 WOREK POLIETYLENOWY (ANTYSTATYCZNY)
 - 8 FILTR ABSOLUTNY HEPA DO WYLOTU POWIETRZA ROBOCZEGO (Skuteczność > 99,995% przy 0,3 mikrona)
- A WLOT SSĄCY
B WYLOT POWIETRZA ROBOCZEGO
C WLOT POWIETRZA CHŁODZĄCEGO DO SILNIKA
D WYLOT POWIETRZA CHŁODZĄCEGO Z SILNIKA
F KONTROLKA ZAPCHANIA FILTRA
M SILNIK

9.0 INSTRUKCJE ODKURZANIA NA SUCHO

OSTRZEŻENIE: Ten odkurzacz został zaprojektowany do usuwania wyłącznie suchych materiałów. Nie używać do cieczy.

1. Zwolnić zatrzaski i zdjąć głowicę zasilającą ze zbiornika.
2. Umieścić worek polietylenowy (poz. 7 na Rys. 1) na dnie zbiornika.

UWAGA Aby uniknąć zassania worka polietylenowego podczas odkurzania, należy docisnąć worek do ścianek i do dna zbiornika w celu usunięcia wszelkich pęcherzy powietrza.

3. Włożyć worek (poz. 6 na Rys. 1) do zbiornika przy wlocie powietrza.
4. Założyć główny filtr tkaninowy (poz. 5 na Rys. 1) na zbiornik. Upewnić się, że uszczelnienie filtra zakrywa wargę zbiornika na całym jej obwodzie.

WAŻNE: Nie używać odkurzacza do czyszczenia na sucho bez zainstalowanych filtrów tkaninowych.

5. Założyć głowicę zasilającą na zbiornik i zamknąć zatrzaski.
6. Zamocować wąż na wlocie powietrza po stronie zbiornika i przyczepić pożądane narzędzie do węża.
7. W celu włączenia odkurzacza, należy przekręcić przełącznik na pozycję ON.
8. W celu wyłączenia urządzenia, należy przekręcić przełącznik na pozycję OFF. Gdy urządzenie nie jest używane, należy odłączyć kabel zasilający od gniazdka.

10.0 CZYSZCZENIE I KONSERWACJA

KONTROLKA ZAPCHANIA FILTRA:

Na odkurzaczu jest zainstalowana kontrolka zapchania filtra. Kontrolka włącza się w przypadku zaniku ssania. W takim przypadku worek może być pełny, może okazać się konieczne wypranie filtrów tkaninowych (filtry główne i filtry bezpieczeństwa) lub wymiana filtrów HEPA.

OSTRZEŻENIE: Gdy zaświeci się kontrolka zapchania filtra, należy jak najszybciej wyłączyć odkurzacza, ponieważ niedrożność filtra powoduje wzrost temperatury wewnątrz urządzenia i może doprowadzić do uszkodzenia silnika.

WAŻNE: Po każdym użyciu i maksymalnie po 8 godzinach nieprzerwanego użytkowania należy przeprowadzić następujące czynności konserwacyjne.

OSTRZEŻENIE: Przed serwisowaniem i konserwacją należy wyłączyć odkurzacza i odłączyć kabel zasilający.

- a Usunąć pełny worek i zastąpić nowym.
- b Opróżnić i wyczyścić zbiornik.

OSTRZEŻENIE: Opróżnić zbiornik w razie konieczności ale również po każdym użyciu (8-godzinnej zmianie). Nie należy dopuszczać, aby zebrany materiał pozostawał w zbiorniku przez dłuższy czas. Nadmierne nagromadzenie zebranych materiałów może prowadzić do wystąpienia zagrożenia zapłonu pyłu.

- c Zalecamy regularne czyszczenie filtrów tkaninowych. Brudne filtry tkaninowe ograniczają przepływ powietrza i zmniejszają wydajność odkurzacza. Filtry tkaninowe (filtry główne i filtry bezpieczeństwa) można prać w ciepłej wodzie (bez dodatku detergentów).

WAŻNE: Po wypraniu filtrów i przed ich ponownym zainstalowaniem w odkurzaczu należy upewnić się, że dokładnie wyschły. Nie instalować ponownie filtrów tkaninowych, jeśli są one jeszcze wilgotne.

- d Filtry tkaninowe należy wymieniać co dwa lub trzy lata w zależności od użycia.
- e Należy regularnie kontrolować filtry tkaninowe. Jeśli filtry tkaninowe są rozerwane, należy je natychmiast wymienić. Rozdarty filtr pozwala na przedostawanie się pyłu i innych materiałów do silnika i może doprowadzić do jego przedwczesnego zużycia.
- f Wyczyścić wąż w celu usunięcia nagromadzonego pyłu, zanieczyszczeń lub innych materiałów.
- g Filtr HEPA należy wymieniać raz na rok lub co dwa lata w zależności od użycia.

OSTRZEŻENIE: NIE UŻYWAĆ FILTRA HEPA PO WYJĘCIU Z URZĄDZENIA.

OSTRZEŻENIE: Kabel zasilający należy utrzymywać w czystości i regularnie sprawdzać pod kątem przecięć i pęknięć.

OSTRZEŻENIE: Podczas wykonywania czynności serwisowych lub naprawczych wszystkie zanieczyszczone elementy, których nie można oczyścić w sposób zadowalający, należy wyrzucić. Takie elementy należy wyrzucić do nieprzepuszczalnych worków zgodnie z wszelkimi obowiązującymi przepisami dotyczącymi usuwania takich odpadów.

OSTRZEŻENIE: Należy regularnie czyścić powierzchnie odkurzacza zwilżoną wodą szmatką, aby uniknąć gromadzenia się złożeń pyłu, które mogą stać się źródłem zapłonu.

11.0 MONTAŻ I WYMIANA FILTRÓW HEPA

Filtr HEPA został zaprojektowany do filtrowania ultradrobnych cząstek. Zapchany filtr HEPA ograniczy przepływ powietrza, zmniejszając jednocześnie wydajność odkurzacza, dlatego trzeba go wymienić.

Trwałość filtrów HEPA zależy przede wszystkim od użycia odkurzacza. Zalecamy wymianę filtrów HEPA raz w roku, jeśli odkurzacz używany jest w sposób intensywny (codziennie). Filtry można wymieniać co dwa lata w przypadku, gdy odkurzacz nie jest używany zbyt często (dwa lub trzy razy w tygodniu).

OSTRZEŻENIE: Jeśli odkurzacz jest używany do usuwania materiałów toksycznych, podczas serwisowania obudowy filtra HEPA lub innej zanieczyszczonej części urządzenia, należy nosić odpowiednią odzież i używać stosownego aparatu oddechowego.

11.1. WYMIANA FILTRA HEPA DO WLOTU POWIETRZA CHŁODZĄCEGO DO SILNIKA (POZ. 1 NA RYS. 1, PATRZ ILUSTRACJA W ROZDZIALE 8)

1. Odłączyć kabel zasilający od gniazdka.
2. Odkręcić trzy nakrętki sześciokątne mocujące górną część głowicy zasilającej do pokrywy.
3. Wyjąć i wyrzucić stary filtr HEPA.
4. Uważnie skontrolować uszczelki pod kątem zużycia i uszkodzeń. Wymienić wadliwe uszczelki.
5. Umieścić nowy filtr na pokrywie.
6. Zamocować górną część głowicy zasilającej do pokrywy, dokręcając trzy nakrętki sześciokątne.
7. Usunąć zanieczyszczony filtr zgodnie z regulacjami rządowymi. (Jeśli dotyczy)

11.2. WYMIANA FILTRA HEPA DO WYLOTU POWIETRZA CHŁODZĄCEGO Z SILNIKA (POZ. 2 NA RYS. 1, PATRZ ILUSTRACJA W ROZDZIALE 8)

1. Odłączyć kabel zasilający od gniazdka.
2. Odkręcić sześć nakrętek sześciokątne mocujące środkową część głowicy zasilającej do pokrywy.
3. Wyjąć i wyrzucić stary filtr HEPA.
4. Uważnie skontrolować uszczelkę na filtrze HEPA. Wymienić wadliwą uszczelkę.
5. Umieścić nowy filtr na pokrywie.
6. Zamocować środkową część głowicy zasilającej do pokrywy, dokręcając sześć nakrętek sześciokątnych.
7. Usunąć zanieczyszczony filtr zgodnie z regulacjami rządowymi. (Jeśli dotyczy)

11.3. WYMIANA FILTRA HEPA DO WYLOTU POWIETRZA ROBOCZEGO (POZ. 8 NA RYS. 1, PATRZ ILUSTRACJA W ROZDZIALE 8)

1. Odłączyć kabel zasilający od gniazdka.
2. Odkręcić sześć nakrętek sześciokątne mocujące dolną część głowicy zasilającej do pokrywy.
3. Wyjąć i wyrzucić stary filtr HEPA.
4. Uważnie skontrolować uszczelkę na filtrze HEPA. Wymienić wadliwą uszczelkę. (Część nr 215372G)
5. Umieścić nowy filtr na pokrywie. (nr 215372)
6. Zamocować dolną część głowicy zasilającej do pokrywy, dokręcając sześć nakrętek sześciokątnych.
7. Usunąć zanieczyszczony filtr zgodnie z regulacjami rządowymi. (Jeśli dotyczy)

11.4. WYMIANA FILTRA HEPA DO WLOTU POWIETRZA ROBOCZEGO (POZ. 3, PATRZ ILUSTRACJA W ROZDZIALE 8)

1. Odłączyć kabel zasilający od gniazdka.
2. Zwolnić zatrzaski i zdjąć głowicę zasilającą ze zbiornika.
3. Usunąć filtr bezpieczeństwa.
4. Odkręcić nakrętkę sześciokątną mocującą filtr HEPA do spodniej części pokrywy.
5. Wyrzucić stary filtr HEPA.
6. Uważnie skontrolować uszczelki pod kątem zużycia i uszkodzeń. Wymienić wadliwe uszczelki.
7. Włożyć nowy filtr HEPA.
8. Zamocować filtr HEPA za pomocą nakrętki sześciokątnej.
9. Ponownie założyć filtr bezpieczeństwa.
10. Usunąć zanieczyszczony filtr zgodnie z regulacjami rządowymi. (Jeśli dotyczy)

12.0 PRZECHOWYWANIE

Zaleca się, aby podczas przechowywania odkurzacza wewnątrz zbiornika było czyste i suche.

13.0 SPECYFIKACJE TECHNICZNE

Napięcie	220-240 V
Częstotliwość	50/60 Hz
Faza	Jedna
P_m^*	1080 W
Moc	1.2 kW
Natężenie prądu	5 A
Przepływ powietrza	194 m ³ /h
Podciśnienie	245 hPa / 2504 mm H ₂ O
Poziom hałasu	72 dB(A)
Typ wtyczki	Nie dołączono
Wlot ssący	60 mm
Typ wózka	Niski wózek jezdniowy z 4 kółkami samonastawnymi (4W)
Pojemność jednorazowego worka filtracyjnego	19 litrów
Długość	43 cm
Szerokość	43 cm
Masa (tylko odkurzacz)	24 kg
Wysokość	102 cm
Długość przewodu	10 m

* **Praca normalna:** warunki, w których maszyna jest normalnie użytkowana, uzyskane przy poborze mocy P_m silnika odkurzacza.

14.0 ROZWIĄZYWANIE PROBLEMÓW:

PROBLEM	MOŻLIWA PRZYCZYNA	ROZWIĄZANIE
Spadek mocy ssania	Filtr(y) tkaninowy(e) może (mogą) być nadmiernie zabrudzone lub pokryte pyłem.	Uprać lub wymienić filtr(y) tkaninowy(e).
	Zbiornik może być pełny.	Opróżnić zbiornik.
	Wąż ssący lub narzędzia odkurzacza mogą być niedrożne.	Usunąć niedrożność za pomocą kija do miotły lub innego odpowiedniego urządzenia.
	Filtry HEPA mogą być zapchane.	Wymienić filtry HEPA

15.0 ZAŁĄCZNIKI

Niezbędne informacje dotyczące instalacji, konserwacji i zgodności części z certyfikatem EX zamontowanych w urządzeniu można znaleźć w następujących dokumentach:

- Dławnica kablowa model GHG 960 - Certyfikat badania typu WE nr PTB 14 ATEX 1015X (6 stron)
- Dławnica kablowa model GHG 960 - Instrukcja obsługi (12 stron)

16.0 DICHIARAZIONE DI CONFORMITA' CE



Integrated
Professional
Cleaning

DEKLARACJA ZGODNOŚCI UE

IPCleaning S.r.l.

Via E. Fermi 2, 26022 Castelveverde (Cremona) , Włochy

Oświadczam na własną odpowiedzialność, że następujące urządzenie:

**Elektryczny odkurzacz przemysłowy, antystatyczny, uziemiony do czyszczenia na sucho
wraz z akcesoriami**

Model:

PLANET 22 S ATEX

mający następujące oznaczenie:

CE  II 3 D Ex h tc IIIC T200°C Dc IP6X

do którego odnosi się niniejsza deklaracja, zostało zaprojektowane i wyprodukowane zgodnie z zasadniczymi wymogami i innymi stosownymi przepisami następujących obowiązujących dyrektyw:

1. Dyrektywa ATEX 2014/34/UE

Zgodność została osiągnięta poprzez zastosowanie następujących norm:

- EN IEC 60079-0:2018
- EN 60079-31:2014
- EN ISO 80079-36: 2016
- EN ISO 80079-37: 2016
- EN 1127-1:2019

REV 8

pod kątem których przeprowadzono wewnętrzną kontrolę produkcji.

Przedmiotowe urządzenie spełnia wymogi bezpieczeństwa elektrycznego, które zostały ujęte w **Dyrektywie maszynowej 2006/42/WE**, i zostało wyprodukowane z następującymi normami:

- EN 60204-1: 2018
- EN 60335-1: 2012 (A11: 2014, A13: 2017)
- EN 60335-2-69: 2012

2. Dyrektywa kompatybilności elektromagnetycznej 2014/30/UE

Zgodność została osiągnięta poprzez zastosowanie następujących norm:

- EN 61000-6-1:2007
- EN 61000-6-3:2007 ze zmianą A1: 2011

Z zastrzeżeniem zastosowania, do którego urządzenie zostało zaprojektowane zgodnie z właściwymi normami i zaleceniami producenta. My, niżej podpisani, niniejszym oświadczamy, że wyżej wymienione urządzenie jest zgodne z wyszczególnionymi dyrektywami i normami.

Castelveverde, 30 lipca 2021

Adwokat

dott. Pietro Annibaldi Corsano



(1) **EU-TYPE-EXAMINATION CERTIFICATE**
(Translation)

(2) Equipment or Protective Systems Intended for Use in
Potentially Explosive Atmospheres - **Directive 2014/34/EU**

(3) EU-Type Examination Certificate Number:

PTB 14 ATEX 1015 X

Issue: 01

(4) Product: Cable gland type GHG 960 **** * ****

(5) Manufacturer: COOPER Crouse-Hinds GmbH

(6) Address: Neuer Weg Nord 49, 69412 Eberbach, Germany

(7) This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 17 of the Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in the confidential Test Report PTB Ex 16-15133.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0:2012 + A11:2013, EN 60079-7:2015, EN 60079-31:2014

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

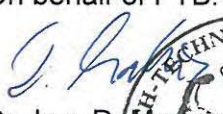
(11) This EU-Type Examination Certificate relates only to the design and construction of the specified product in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

(12) The marking of the product shall include the following:

 **II 2 G Ex eb IIC Gb**
 **II 2 D Ex tb IIIC Db**

Konformitätsbewertungsstelle, Sektor Explosionsschutz
On behalf of PTB:

Braunschweig, January 16, 2017


Dr.-Ing. D. Markus
Oberregierungsrat



sheet 1/6

EU-Type Examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt. In case of dispute, the German text shall prevail.

(13)

SCHEDULE

(14) **EU-Type Examination Certificate Number PTB 14 ATEX 1015 X, Issue: 01**

(15) Description of Product

The cable gland, type GHG 960 **** * ****, made of polyamide serves to introduce permanently laid cables into electrical equipment of the type of protection Increased Safety "eb" and Protection by enclosure "tb". The cable entry is composed of intermediate glands with two different widths of threaded joint, sealing rings of different designs and a cap nut. Accessories are: blanking plug, reducing gland, multiple cable gland, flat cable gland and expansion gland. The cap nut is optionally made in black resp. blue for the distinction of Ex-e and Ex-i circuits.

They are installed in enclosures with through-holes or threaded holes, with or without lock nut.

Technical data

Type	Ø Clamping range in mm	Service temperature	One pcs.	Packing set
Cable Gland M12	Ø 5 – 7	-20°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Cable Gland M16	Ø 5.5 – 7 Ø 7 – 10	-20°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Cable Gland M20	Ø 5.5 – 7 Ø 7 – 9 Ø 9.5 – 13	-20°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Cable Gland M20	Ø 5.5 – 7 Ø 7 – 9 Ø 9.5 – 11	-40°C - +70°C	GHG 960 9248 P****	GHG 960 1955 R****
Cable Gland M25	Ø 8 – 10 Ø 10 – 13 Ø 13.5 – 17.5	-25°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Cable Gland M25	Ø 8 – 10 Ø 10 – 13 Ø 13.5 – 15	-55°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Cable Gland M32	Ø 14 – 17 Ø 17.5 – 21	-55°C - +70°C	GHG 960 9248 P****	GHG 960 1955 R****
Cable Gland M32	Ø 14 – 17 Ø 17.5 – 21	-20°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Cable Gland M40	Ø 19 – 22 Ø 22 – 28	-55°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Cable Gland M50	Ø 24 – 28 Ø 28 – 35	-55°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Cable Gland M63	Ø 29 – 35 Ø 36 – 41 *	-55°C - +70°C	GHG 960 9235 P****	GHG 960 1955 R****
Extension gland M16/M20X1.5	Ø 5.5 – 7 Ø 7 – 9 Ø 9.5 – 13	-20°C - +70°C	GHG 960 9244 P****	GHG 960 1956 R****
Extension gland M20/M25X1.5	Ø 8 – 10 Ø 10 – 13 Ø 13.5 – 15	-20°C - +70°C	GHG 960 9244 P****	GHG 960 1956 R****
Extension gland M25/M32X1.5	Ø 14 – 17 Ø 17.5 – 21	-55°C - +70°C	GHG 960 9244 P****	GHG 960 1956 R****
Extension gland M32/M40X1.5	Ø 19 – 22 Ø 22 – 28	-55°C - +70°C	GHG 960 9244 P****	GHG 960 1956 R****
Extension gland M40/M50X1.5	Ø 24 – 28 Ø 28 – 35	-55°C - +70°C	GHG 960 9244 P****	GHG 960 1956 R****
Extension gland M50/M63X1.5	Ø 29 – 35 Ø 36 – 41 *	-55°C - +70°C	GHG 960 9244 P****	GHG 960 1956 R****
Reducing gland M16-M12		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M20-M12		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M20-M16		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M25-M12		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M25-M16		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M25-M20		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M32-M12		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M32-M16		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****
Reducing gland M32-M20		-55°C - +70°C	GHG 960 9237 P****	GHG 960 1946 R****

sheet 2/6

EU-Type Examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt. In case of dispute, the German text shall prevail.

SCHEDULE TO EU-TYPE EXAMINATION CERTIFICATE PTB 14 ATEX 1015 X, Issue: 01

Torque cable gland

Type	Service temperature range	Impact energy	Clamping range	Torque Pressure screw	Torque Gland body
KLE	°C	Joule	Ø mm	Nm	Nm
M16	-20 - +70	low, 4	5.5 – 7.0 7.0 – 10.0	1.0 / 1.0 1.0 / 1.4	3.3
M20	-20 - +70	high, 7	5.5 – 7.0 7.0 – 9.0 9.5 – 13.0	1.5 / 1.0 1.5 / 1.4 1.0 / 1.7	2.7
M20	-40 - +70	low, 4	5.5 – 7.0 7.0 – 9.0 9.5 – 13.0	1.5 / 1.0 1.5 / 1.4 1.0 / 1.7	2.7
M20 split gasket	-20 - +70	high, 7	2,0 7.0 – 9.0	3,5 1.5 / 1.4	2.7
M25	-20 - +70	high, 7	10.0 – 13.0 13.5 – 17.5	2.3 / 2.6 1.3 / 2.3	3.0
M25	-25 - +70	high, 7	8.0 – 10.0 10.0 – 13.0 13.5 – 17.5	1.5 / 2.0 2.3 / 2.6 1.3 / 2.3	3.0
M25	-55 - +70	high, 7	8.0 – 10.0 10.0 – 13.0 13.5 - 15	1.5 / 2.0 2.3 / 2.6 1.5 / 2.3	3.0
M25 flat cable	-55 - +70 (+110°C)	high, 7	5-8x11-12.5 6-8x11-14	5.0 3.5	5.0
PG16	-25 - +70	high, 7	10.0 – 13.0 13.5 – 15.0	2.3 / 2.6 1.5 / 2.3	5.0
PG16	-55 - +70	high, 7	10.0 – 13.0 13.5 - 17.5	2.3 / 2.6 1.3 / 2.3	5.0
M32	-20 - +70	high, 7	14.0 – 17.0 17.5 – 21.0	3.0 / 4.0 1.5 / 1.3	5.0
M32	-55 - +70	high, 7	14.0 – 17.0 17.5 – 21.0	3.0 / 4.0 1.5 / 1.3	5.0
M40	-55 - +70	high, 7	19.0 – 22.0 22.0 – 28.0	3.3 / 5.5 3.3 / 6.7	7.5
M50	-55 - +70	high, 7	24.0 – 28.0 28.0 – 35.0	6.0 / 7.0 5.0 / 7.0	7.5
M63	-55 - +70	high, 7	29.0 – 35.0 36.0 - 41.0	12.0 / 12.0 12.0 / 13.0	7.5

Torque multiple cable gland

Type	Service temperature range	Impact energy	Clamping range	Torque Pressure screw	Torque Gland body
KLE	°C	Joule	Ø mm	Nm	Nm
M25 2-fach	-20 - +70	high, 7	2x 4.5 – 7.0	2.0 / 2.0	3.0
M32 4-fach	-20 - +70	high, 7		3.0 / 3.5	5.0

SCHEDULE TO EU-TYPE EXAMINATION CERTIFICATE PTB 14 ATEX 1015 X, Issue: 01

Torque extension cable gland

Type	Service temperature range	Impact energy	Clamping range	Torque Pressure screw	Torque Gland body
KLE	°C	Joule	Ø mm	Nm	Nm
M16/M20	-20 - +70	high, 7	5.5 – 7.0 7.0 – 9.0 9.5 – 13.0	1.0 / 1.0 1.5 / 1.4 1.0 / 1.7	2.7
M16/M20	-40 - +70	low, 4	5.5 – 7.0 7.0 – 9.0 9.5 – 13.0	1.5 / 1.0 1.5 / 1.4 1.0 / 1.7	2.7
M20/M25	-20 - +70	high, 7	8.0 – 10.0 10.0 – 13.0 13.5 – 17.5	1.5 / 1.0 2.3 / 2.6 1.3 / 2.3	3.0
M20/M25	-55 - +70	high, 7	8.0 – 10.0 10.0 – 13.0 13.5 – 15.0	1.5 / 2.0 2.3 / 2.6 1.5 / 2.3	3.0
M25/M32	-55 - +70	high, 7	14.0 – 17.0 17.5 – 21.0	3.0 / 4.0 1.5 / 1.3	5.0
M32/M40	-55 - +70	high, 7	19.0 – 22.0 22.0 – 28.0	3.3 / 5.5 3.3 / 6.7	7.5
M40/M50	-55 - +70	high, 7	24.0 – 28.0 28.0 – 35.0	6.0 / 7.0 5.0 / 7.0	7.5
M50/M63	-55 - +70	high, 7	29.0 – 35.0 36.0 – 41.0 (41.0 – 48.0)	12.0 / 12.0 12.0 / 13.0 (13.0 / 7.8)	7.5

Nomenclature

GHG 960	****	*	****
1	2	3	4

- 1) Type
- 2) Design see table 1 above
- 3) P = Single part
R = Packing set
- 4) Variants e.g. colour, thread length, blanking elements, size, etc.

Details of change:

- 1) New test according to EN 60079-31:2014 and EN 60079-7:2015.
- 2) The sizes M16 to M25 have got an additional sealing ring.
- 3) The size G26 of the flat cable gland has been changed to G24.
- 4) The minimum ambient temperature of size M25x1.5 is changed to -25 °C

(16) Test Report PTB Ex16-15133

SCHEDULE TO EU-TYPE EXAMINATION CERTIFICATE PTB 14 ATEX 1015 X, Issue: 01

(17) Specific conditions of use

Only permanently installed cables may be entered through the glands. The operating company must ensure that adequate strain relief is provided.

The degree of protection (IP66) will only be met if seals and cable glands are properly fitted. The manufacturer's instructions must be followed.

The types with low impact energy have to be mounted in the enclosure, so they are mechanically protected against impact energy.

The blanking plug type GHG 960 6107 P**** resp. GHG 960 1944 R**** shall only be used with the cable glands type GHG 960 92** P**** resp. GHG 960 19** R****.

(18) Essential health and safety requirements

Met by compliance with the aforementioned standards.

According to Article 41 of Directive 2014/34/EU, EC-type examination certificates which have been issued according to Directive 94/9/EC prior to the date of coming into force of Directive 2014/34/EU (April 20, 2016) may be considered as if they were issued already in compliance with Directive 2014/34/EU. By permission of the European Commission supplements to such EC-type examination certificates and new issues of such certificates may continue to hold the original certificate number issued before April 20, 2016.

Konformitätsbewertungsstelle, Sektor Explosionsschutz
On behalf of PTB:

Braunschweig, January 16, 2017

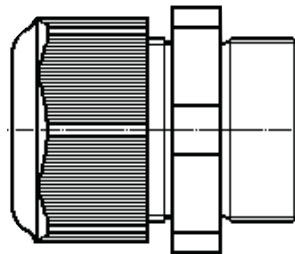

Dr.-Ing. D. Markus
Oberregierungsrat



Explosiongeschützte Kabel- und Leitungseinführungen,
Verschlussstopfen, Schraubverschlüsse, Trompetenverschraubungen,
Reduzierungen und Entwässerungsstopfen

Explosion-protected cable entries, blanking plugs, screw plugs,
trumpet-shaped cable glands, reducing glands and drain plugs

Entrées de câble, bouchons filetés, bouchons de fermeture,
presses-étoupes à trompette, bagues de réduction et bouchons de
purge pour atmosphères explosives



CZ: "Tento návod k použití si můžete vyžádat ve svém mateřském jazyce u příslušného zastoupení společnosti Cooper Crouse-Hinds/CEAG ve vaší zemi."

DK: "Montagevejledningen kan oversættes til andre EU-sprog og rekvireres hos Deres Cooper Crouse-Hinds/CEAG leverandør"

E: "En caso necesario podrá solicitar de su representante Cooper Crouse-Hinds/CEAG estas instrucciones de servicio en otro idioma de la Union Europea"

EST: "Seda kasutusjuhendit oma riigikeeles võite küsida oma riigis asuvasst asjaomasest Cooper Crouse-Hinds/CEAG esindusest."

FIN: "Tarvittaessa tämän käyttöohjeen käännös on saatavissa toisella EU:n kielellä Teidän Cooper Crouse-Hinds/CEAG - edustajaltanne"

GR: *Εάν χρειασθεί, μεταφραση των οδηγιών χρήσεως σε άλλη γλώσσα της ΕΕ, μπορεί να ζητηθεί από τον Αντιπροσωπο της Cooper Crouse-Hinds/CEAG*

H: "A kezelési útmutatót az adott ország nyelvén a Cooper Crouse-Hinds/CEAG cég helyi képviselőtől igényelheti meg."

I: "Se desiderate la traduzione del manuale operativo in un'altra lingua della Comunità à Europea potete richiederla al vostro rappresentante Cooper Crouse-Hinds/CEAG"

LT: "Šios naudojimo instrukcijos, išverstos į Jūsų gimtąją kalbą, galite pareikalauti atsakingoje "Cooper Crouse-Hinds/CEAG" atstovybėje savo šalyje."

LV: "Šo ekspluatācijas instrukciju valsts valodā varat pieprasīt jūsu valsts atbildīgajā Cooper Crouse-Hinds/CEAG pārstāvniecībā."

M: "Jistghu jitolbu dan il-manwal fil-lingwa nazzjonali taghhom minghand ir-rappreżentant ta' Cooper Crouse Hinds/CEAG f'pajjiżhom."

NL: "Indien noodzakelijk kan de vertaling van deze gebruiksinstructie in een andere EU-taal worden opgevraagd bij Uw Cooper Crouse-Hinds/CEAG - vertegenwoordiging"

P: "Se for necessária a tradução destas instruções de operação para outro idioma da União Europeia, pode solicita-la junto do seu representante Cooper Crouse-Hinds/CEAG"

PL: "Niniejszą instrukcję obsługi w odpowiedniej wersji językowej można zamówić w przedstawicielstwie firmy Cooper-Crouse-Hinds/CEAG na dany kraj."

S: "En översättning av denna montage- och skötselinstruktion till annat EU - språk kan vid behov beställas från Er Cooper Crouse-Hinds/CEAG- representant"

SK: "Tento návod na obsluhu Vám vo Vašom rodnom jazyku poskytne zastúpenie spoločnosti Cooper Crouse-Hinds/CEAG vo Vašej krajine."

SLO: "Navodila za uporabo v Vašem jeziku lahko zahtevate pri pristojnem zastopništvu podjetja Cooper Crouse-Hinds/CEAG v Vaši državi."

RUS: "При необходимости, вы можете запрашивать перевод данного руководства на другом языке ЕС или на русском от вашего Cooper Crouse-Хиндс / CEAG - представителяй."

GHG 960 7001 P0001 D/GB/F (s)

EAT•N

Powering Business Worldwide



Kabel- und Leitungseinführungen,
Verschlussstopfen,
Schraubverschlüsse, Trompeten-
verschraubungen, Reduzierungen
und Entwässerungsstopfen

Cable entries, blanking plugs,
screw plugs, trumpet-shaped cab-
le glands, reducing glands
and drain plugs

Entrées de câble, bouchons filetés,
bouchons de fermeture, presses-
étoupes à trompette, bagues de
réduction et bouchons de purge

Inhaltsverzeichnis:

1	Technische Daten	3
2	Legende.....	9
2.1	Sicherheitshinweise	9
3	Normenkonformität	9
4	Verwendungsbereich.....	9
5	Verwendung / Eigenschaften	9
6	Installation.....	10
6.1	Montage.....	10
6.2	Inbetriebnahme	12
7	Instandhaltung / Wartung.....	12
8	Reparatur / Instandsetzung / Änderung.....	12
9	Entsorgung / Wiederverwertung	12

Konformitätserklärung
separat beigelegt.

Contents:

1	Technical data	13
2	Legend	19
2.1	Safety instructions.....	19
3	Conformity with standards	19
4	Field of application.....	19
5	Application / Properties	19
6	Installation.....	20
6.1	Mounting	20
6.2	Putting into operation	22
7	Maintenance / Servicing	22
8	Repairs / Modifications	22
9	Disposal / Recycling.....	22

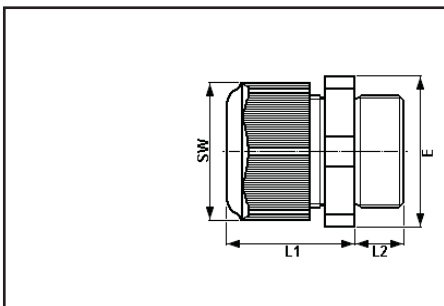
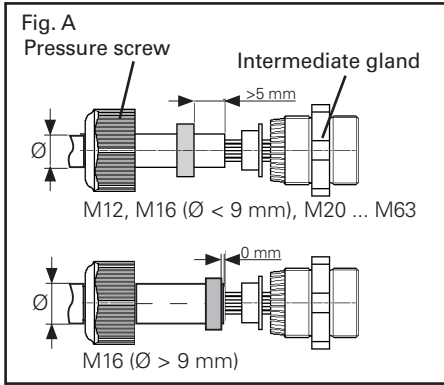
Declaration of conformity,
enclosed separately.

Contenu:

1	Caractéristiques techniques	23
2	Légende.....	29
2.1	Consignes de sécurité	29
3	Conformité aux normes	29
4	Domaine d'utilisation.....	29
5	Utilisation / Propriétés	29
6	Installation.....	30
6.1	Montage.....	30
6.2	Mise en service	32
7	Maintien/Entretien	32
8	Réparations / Remise en état.....	32
9	Évacuation des déchets / Recyclage	32

Déclaration de conformité,
jointe séparément.

Dimension drawings and dimensions in mm



1 Technical data

1.1 Technical details for: Cable entries (KLE) M12x1,5 to M63x1,5

ATEX type examination certificate:	PTB 14 ATEX 1015 X ^(A)
Marking acc. to 2014/34/EU and standard:	EN 60079-0
	⊕ II 2 G Ex e IIC Gb
	⊕ II 2 D Ex tb IIIC Db
IECEx type examination certificate:	IECEx PTB 14.0027X ^(A)
Category of application:	IEC60079-0
	Ex e IIC Gb
	Ex tb IIIC Db

^(A) The EC-Type Examination Certificate and any future supplements thereto shall, at the same time, be regarded as supplements to the EC-Type Examination Certificates PTB 99 ATEX 3128 X and PTB 99 ATEX 3101 X

Perm. storage temperature in original packing:	-20° C to +70° C
Degree of protection to IEC/EN 60529:	IP 66* ⁽¹⁾ (when fully assembled)

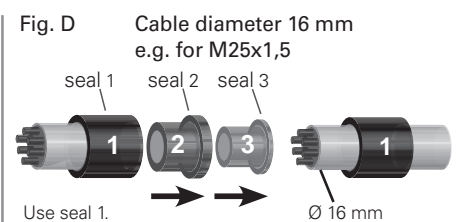
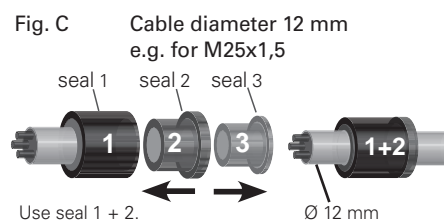
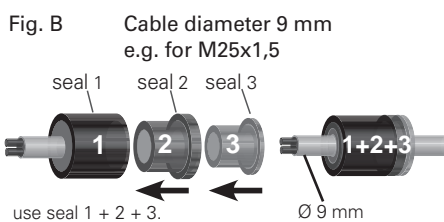
*⁽¹⁾ M40, M50 und M63 with suitable flange seal

Type	SW	L1	L2	E	weight app.
M12x1,5	15 mm	19,3 mm	12 / 8 mm	16,2 mm	3,4 g
M16x1,5	20 mm	23,0 mm	12 / 8 mm	22,0 mm	6,5 g
M20x1,5	24 mm	25,0 mm	13 / 8 mm	26,5 mm	10,1 g
M25x1,5	29 mm	29,5 mm	13 / 8 mm	32,0 mm	16,9 g
M32x1,5	36 mm	35,5 mm	15 / 10 mm	40,0 mm	27,6 g
M40x1,5	46 mm	39,5 mm	15 / 10 mm	50,5 mm	50,3 g
M50x1,5	55 mm	44,0 mm	16 / 12 mm	60,0 mm	75,9 g
M63x1,5	68 mm	47,0 mm	16 / 12 mm	75,0 mm	117,6 g

Type	operating temperature	impact resistance	Cable diameter											Screw-in thread in enclosure	Colour of dust protection cover	
			Seal 1+2+3 ⁽¹⁾⁽²⁾⁽³⁾						Seal 1+2 ⁽¹⁾⁽²⁾				Seal 1 ⁽¹⁾			
			min.		max.		min.		max.		min.	max.	min.			max.
	°C	Joule	∅	Nm**	∅ ⁽¹⁾⁽²⁾	Nm**	∅	Nm**	∅ ⁽¹⁾⁽²⁾	Nm**	∅	Nm**	∅ ⁽²⁾	Nm**	Nm**	
M12x1,5	-20 - 70	4									5,0	0,8	7,0	1,0	1,2	white
M16x1,5	-20 - 70	4					5,5	1,0	7,0	1,0	7,0	1,0	10,0	1,4	3,3	white
M20x1,5	-20 - 70	7	5,5	1,5	7,0	1,0	7,0	1,5	9,0	1,4	9,5	1,0	13,0	1,7	2,7	white
M20x1,5	-40 - 70	4	5,5	1,5	7,0	1,0	7,0	1,5	9,0	1,4	9,5	1,0	11,0	1,7	2,7	green
M25x1,5	-20 - 70	7	8,0	1,5	10,0	2,0	10,0	2,3	13,0	2,6	13,5	1,3	17,5	2,3	3,0	white
M25x1,5	-55 - 70	7	8,0	1,5	10,0	2,0	10,0	2,3	13,0	2,6	13,5	1,5	15,0	2,3	3,0	green
M32x1,5	-20 - 70	7					14,0	3,0	17,0	4,0	17,5	1,5	21,0	1,3	5,0	white
M32x1,5	-55 - 70	7					14,0	3,0	17,0	4,0	17,5	1,5	21,0	1,3	5,0	green
M40x1,5	-55 - 70	7					19,0	3,3	22,0	5,5	22,0	3,3	28,0	6,7	7,5	green
M50x1,5	-55 - 70	7					24,0	6,0	28,0	7,0	28,0	5,0	35,0	7,0	7,5	green
M63x1,5	-55 - 70	7					29,0	12,0	35,0	12,0	36,0	12,0	41,0	13,0	7,5	green
additional seal							41,0	13,0	48,0	7,8						

** Test torques at 20°C

⁽¹⁾ The tests of clamping ranges and torque values were performed with metal mandrel. The clamping range can vary by using cables with different manufacturing tolerances and material properties. Please use the combination of sealing 1 + 2 + 3 for the intermediate region.
⁽²⁾ When selecting the seal rubber, ensure that the cap nut can be tightened when carrying out any future maintenance work on the cable entry.



Cable entries, blanking plugs, screw plugs, trumpet-shaped cable glands, reducing glands and drain plugs

Dimension drawings and dimensions in mm

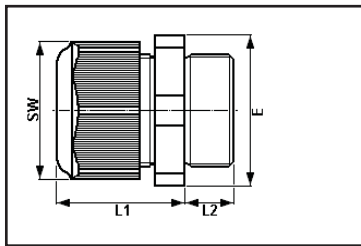
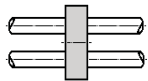


Fig. D/1 Seal insert



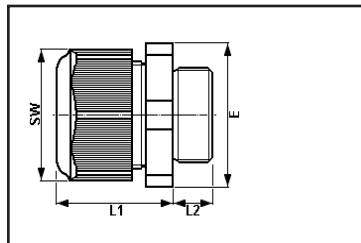
for multiple gland

1.2 Multiple glands

Type	SW	L1	L2	E	weight app.
M25x1,5 2- times	29 mm	29,5 mm	13 / 8 mm	32,0 mm	16,9 g
M32x1,5 4- times	36 mm	35,5 mm	15 / 10 mm	40,0 mm	27,6 g

Type	Operating temperature	Impact resistant	Cable diameter				
			Seal 1				
			min.		max.		
	°C	Joule	Ø	Nm	Ø	Nm	
M25x1,5 2- times	-20 - 70	< 7	2x	4,5	2,0	7,0	2,0
M32x1,5 4- times	-20 - 70	< 7	4x	4,5	3,0	7,0	3,5

1.3 Enlargement glands



Type	SW	L1	L2	E	weight app.
M16x1,5 / M20x1,5	24 mm	25,0 mm	12 mm	26,5 mm	9,2 g
M20x1,5 / M25x1,5	29 mm	29,5 mm	13 mm	32,0 mm	16,7 g
M25x1,5 / M32x1,5	36 mm	35,5 mm	15 mm	40,0 mm	27,0 g
M32x1,5 / M40x1,5	46 mm	39,5 mm	15 mm	50,5 mm	46,5 g
M40x1,5 / M50x1,5	55 mm	44,0 mm	15 mm	60,0 mm	73,5 g
M50x1,5 / M63x1,5	68 mm	47,0 mm	16 mm	75,0 mm	106,4 g

Type	Operating temperature	Impact resistant	Cable diameter												Screw-in thread in enclosure
			Seal 1+2+3 ¹ ² ³				Seal 1+2 ¹ ²				Seal 1 ¹				
			min.		max.		min.		max.		min.		max.		
	°C	Joule	Ø	Nm**	Ø ⁽¹⁾⁽²⁾	Nm**	Ø	Nm**	Ø ⁽¹⁾⁽²⁾	Nm**	Ø	Nm**	Ø ⁽¹⁾	Nm**	Nm**
M16x1,5 / M20x1,5	-20 - 70	< 7	5,5	1,5	7,0	1,0	7,0	1,5	9,0	1,4	9,5	1,0	13,0	1,7	3,3
	-40 - 70	< 4	5,5	1,5	7,0	1,0	7,0	1,5	9,0	1,4	9,5	1,0	11,0	1,7	3,3
M20x1,5 / M25x1,5	-20 - 70	< 7	8,0	1,5	10,0	2,0	10,0	2,3	13,0	2,6	13,5	1,3	17,5	2,3	2,7
	-40 - 70	< 4	8,0	1,5	10,0	2,0	10,0	2,3	13,0	2,6	13,5	1,5	15,0	2,3	2,7
M25x1,5 / M32x1,5	-55 - 70	< 7					14,0	3,0	17,0	4,0	17,5	1,5	21,0	1,3	3,0
M32x1,5 / M40x1,5	-55 - 70	< 7					19,0	3,3	22,0	5,5	22,0	3,3	28,0	6,7	5,0
M40x1,5 / M50x1,5	-55 - 70	< 7					24,0	6,0	28,0	7,0	28,0	5,0	35,0	7,0	7,5
M50x1,5 / M63x1,5	-55 - 70	< 7					29,0	12,0	35,0	12	36,0	12,0	41,0	13,0	7,5
additional seal							41,0	13,0	48,0	7,8					

** Test torques at 20°C

⁽¹⁾ The tests of clamping ranges and torque values were performed with metal mandrel. The clamping range can vary by using cables with different manufacturing tolerances and material properties. Please use the combination of sealing 1 + 2 + 3 for the intermediate region.

⁽²⁾ When selecting the seal rubber, ensure that the cap nut can be tightened when carrying out any future maintenance work on the cable entry.

Dimension drawings and dimensions in mm

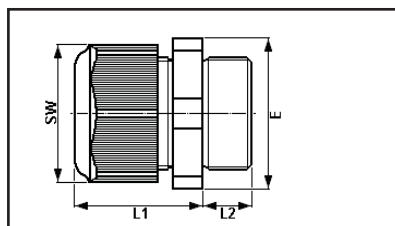
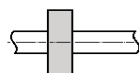


Fig. D/2 Seal insert



for gland for flat cables

1.4 Cable entries in special versions

Type	SW	L1	L2	E	weight app.
M20 with seal Ø 2 mm	24 mm	25,0 mm	13 / 8 mm	26,5 mm	10,1 g
M20 with slotted seal Ø 7,0- 13 mm	24 mm	25,0 mm	13 / 8 mm	26,5 mm	10,1 g
M25 flat cable	29 mm	29,5 mm	13 / 8 mm	32,0 mm	16,9 g
M25 with PG 16 thread	36 mm	35,5 mm	15 / 10 mm	40,0 mm	27,6 g

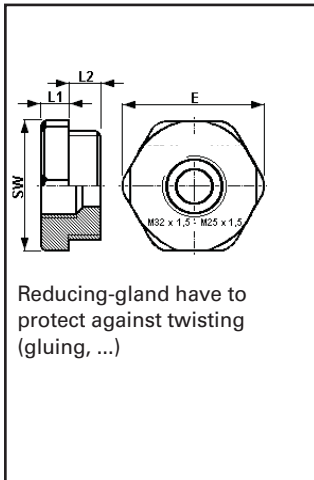
Type	Operating temperature	Impact resistant	Cable-diameter								Screw-in thread in enclosure
			Seal 1+2				Seal 2				
	°C	Joule	min. Ø	max. Nm**	min. Ø ⁽¹⁾⁽²⁾	max. Nm**	min. Ø	max. Nm**	min. Ø ⁽¹⁾⁽²⁾	max. Nm**	
M20 with seal Ø 2 mm	-20 - 60	< 7	2,0	3,5						2,7	
M20x1,5 with slotted seal Ø 7,0- 13 mm	-5 - 45		Breakout-Innenkabel Typ: orange								2,7
	-20 - 60		Ultra-Fox Plus Typ: 903 AG 621 02 709								2,7
	-20 - 60		Ehret / ICS 24 Typ: 84 305								2,7
M25x1,5 with PG 16 thread	-20 - 70	< 7	10,0	2,3	13,0	2,6	13,5	1,3	17,5	2,3	3,0
	-55 - 70	< 7	10,0	2,3	13,0	2,6	13,5	1,5	15,0	2,3	3,0
M25x1,5 flat cable	-55 - 70 (110)	< 7	G18 = 5-8x9-12,5 Flachkabel			5,0					3,0
M25x1,5 flat cable	-55 - 70 (110)	< 7	G24 / G26 = 6-8x11-14 Flachkabel			3,5					3,0
	Cable type		Seal dimensions				Cable dimensions				
M25 flat cable	Raychem XTV-4XTV 2 ...		8,0	x	11,0	mm	7,5	x	11,0	mm	3,0
M25 flat cable	Raychem VPL-5VPL 2 ...		8,0	x	11,0	mm	7,5	x	11,5	mm	3,0
M25 flat cable	Raychem BTV-3BTV 2 ...		8,0	x	11,0	mm	6,0	x	11,0	mm	3,0
M25 flat cable	Raychem QTV-10QTVR2		8,0	x	11,0	mm	5,0	x	12,5	mm	3,0
M25 flat cable Raychem	Raychem BTV-10BTV 2 ...		8,0	x	14,0	mm	6,0	x	14,0	mm	3,0
M25 flat cable	Raychem KTV-5KTV 2 ...		8,0	x	14,0	mm	7,5	x	13,5	mm	3,0

** Test torques at 20°C

(1) The tests of clamping ranges and torque values were performed with metal mandrel. The clamping range can vary by using cables with different manufacturing tolerances and material properties. Please use the combination of sealing 1 + 2 for the intermediate region.

(2) When selecting the seal rubber, ensure that the cap nut can be tightened when carrying out any future maintenance work on the cable entry.

Dimension drawings and dimensions in mm

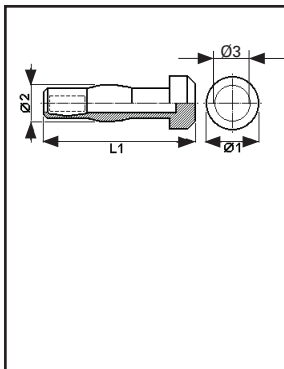


1.5 Reducing glands

Type	Operating temperature / °C	SW	L1	L2	E	Screw-in thread in enclosure / Nm	weight app.
M16x1,5 / M12x1,5	-55 - 70					3,3 Nm	
M20x1,5 / M12x1,5	-55 - 70	24 mm	6,0 mm	8 mm	26,5 mm	2,7 Nm	9,0 g
M20x1,5 / M16x1,5	-55 - 70	24 mm	6,0 mm	8 mm	26,5 mm	2,7 Nm	9,0 g
M25x1,5 / M12x1,5	-55 - 70	29 mm	6,0 mm	8 mm	32,0 mm	3,0 Nm	12,5 g
M25x1,5 / M16x1,5	-55 - 70	29 mm	6,0 mm	8 mm	32,0 mm	3,0 Nm	12,5 g
M25x1,5 / M20x1,5	-55 - 70	29 mm	6,0 mm	8 mm	32,0 mm	3,0 Nm	12,5 g
M32x1,5 / M12x1,5	-55 - 70	36 mm	6,0 mm	10 mm	40,0 mm	5,0 Nm	13,5 g
M32x1,5 / M16x1,5	-55 - 70	36 mm	6,0 mm	10 mm	40,0 mm	5,0 Nm	13,5 g
M32x1,5 / M20x1,5	-55 - 70	36 mm	6,0 mm	10 mm	40,0 mm	5,0 Nm	13,5 g
M32x1,5 / M25x1,5	-55 - 70	36 mm	6,0 mm	10 mm	40,0 mm	5,0 Nm	13,0 g
M40x1,5 / M16x1,5	-55 - 70	46 mm	6,0 mm	10 mm	50,5 mm	7,5 Nm	21,0 g
M40x1,5 / M20x1,5	-55 - 70	46 mm	6,0 mm	10 mm	50,5 mm	7,5 Nm	21,0 g
M40x1,5 / M25x1,5	-55 - 70	46 mm	6,0 mm	10 mm	50,5 mm	7,5 Nm	23,0 g
M40x1,5 / M32x1,5	-55 - 70	46 mm	6,0 mm	10 mm	50,5 mm	7,5 Nm	21,0 g
M50x1,5 / M20x1,5	-55 - 70	55 mm	6,0 mm	12 mm	60,0 mm	7,5 Nm	72,0 g
M50x1,5 / M25x1,5	-55 - 70	55 mm	6,0 mm	12 mm	60,0 mm	7,5 Nm	72,0 g
M50x1,5 / M32x1,5	-55 - 70	55 mm	6,0 mm	12 mm	60,0 mm	7,5 Nm	72,0 g
M50x1,5 / M40x1,5	-55 - 70	55 mm	6,0 mm	12 mm	60,0 mm	7,5 Nm	65,0 g
M63x1,5 / M25x1,5	-55 - 70	68 mm	6,0 mm	12 mm	75,0 mm	7,5 Nm	40,0 g
M63x1,5 / M32x1,5	-55 - 70	68 mm	6,0 mm	12 mm	75,0 mm	7,5 Nm	40,0 g
M63x1,5 / M40x1,5	-55 - 70	68 mm	6,0 mm	12 mm	75,0 mm	7,5 Nm	40,0 g
M63x1,5 / M50x1,5	-55 - 70	68 mm	6,0 mm	12 mm	75,0 mm	7,5 Nm	30,0 g

L1 = Screw-in thread in enclosure
L2 = Reducing thread

1.6 Blanking plug for multiple glands



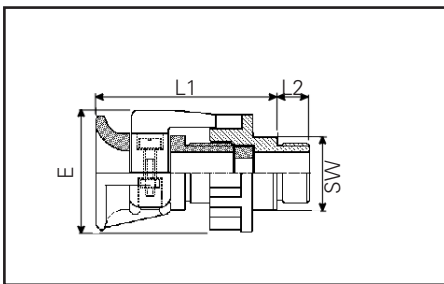
Type	Operating temperature / °C	Ø 1	Ø 2	L1	Ø 3	weight app.
M12x1,5*	-55 / +70	7,0 mm	6,0 mm	30,3 mm	5,0 mm	1,0 g
M16x1,5	-55 / +70	8,0 mm	7,0 mm	33,0 mm	6,0 mm	1,3 g
M20x1,5	-55 / +70	12,0 mm	8,5 mm	34,5 mm	7,0 mm	6,6 g
M25x1,5	-55 / +70	16,0 mm	11,0 mm	36,0 mm	10,0 mm	2,8 g
M32x1,5	-55 / +70	20,0 mm	14,0 mm	39,5 mm	13,0 mm	4,6 g
M40x1,5	-55 / +70	24,0 mm	20,0 mm	42,0 mm	19,0 mm	7,0 g
M50x1,5	-55 / +70	32,0 mm	26,0 mm	44,0 mm	25,0 mm	8,0 g
M63x1,5	-55 / +70	39,0 mm	34,0 mm	45,0 mm	32,0 mm	9,0 g

* for multiple glands M25x1,5 and M32x1,5

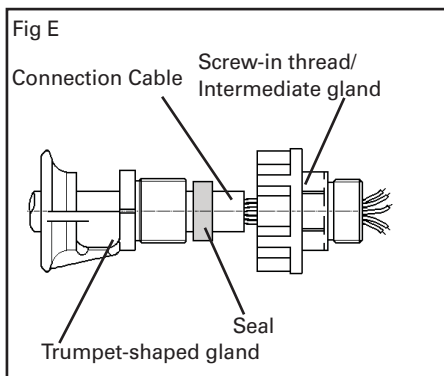
Cable entries, blanking plugs, screw plugs, trumpet-shaped cable glands, reducing glands and drain plugs

Dimension drawings and dimensions in mm 1.7 Trumpet-shaped glands M20 to M63

ATEX type examination certificate:	PTB 00 ATEX 3121	
Marking acc. to 2014/34/EU and standard:	EN 60079-0	
	⊕ II 2 G Ex e II	
	⊕ II 2 D Ex tD A21 IP66	
IECEX type examination certificate:	IECEX BK1 08.0007	
Category of application:	IEC60079-0	
	Ex e II	
	Ex tD A21 T85°C IP66	
Perm. storage temperature in original packing:	-20° C +40° C	
Degree of protection to IEC/EN 60529:	IP 66 (fully assembled)	

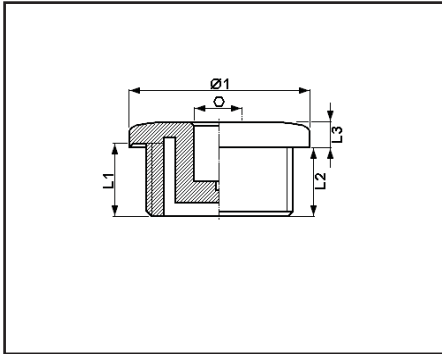


Type	SW	L1	L2	E width across corners	weight app.
M20x1.5	27 mm	64 mm	15 mm	47 mm	57 g
M25x1.5	32 mm	65 mm	15 mm	51 mm	68 g
M32x1.5	41 mm	80 mm	15 mm	68 mm	138 g
M40x1.5	50 mm	86 mm	15 mm	81 mm	191 g
M50x1.5	60 mm	95 mm	16 mm	96 mm	325 g
M63x1.5	75 mm	105 mm	16 mm	107 mm	757 g



Type	Operating temperature °C	Impact re- sistant Joule	Cable diameter		strain Relief (screws)		Screw-in thread Nm
			min. Ø	max. Ø	Nm	Nm	
			Trumpet-shaped gland				
M20x1,5	-40 - 85	< 7	8,0	13,0	3,0	1,5	3,5
M25x1,5	-40 - 85	< 7	11,0	16,0	3,0	2,0	4,0
M32x1,5	-40 - 85	< 7	15,0	20,0	6,0	4,0	7,5
M40x1,5	-40 - 85	< 7	19,0	27,0	10,0	6,0	12,0
M50x1,5	-40 - 85	< 7	26,0	34,0	30,0	10,0	35,0
M63x1,5	-40 - 85	< 7	35,0	46,0	40,0	15,0	45,0

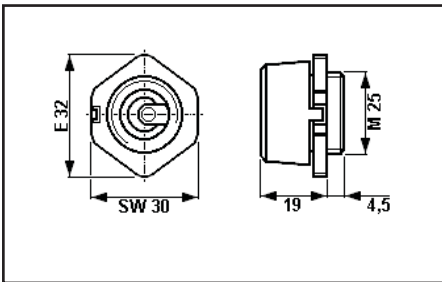
Dimension drawings and dimensions in mm

1.8 Screw plugs

ATEX type examination certificate:	PTB 98 ATEX 3130	
Marking acc. to 2014/34/EU and standard:	EN 60079-0	
	⊕ II 2 G Ex IIC Gb	
	⊕ II 2 D Ex tb IIIC Db IP66	(not for M63x1,5)
IECEX type examination certificate::	IECEX PTB 03.0000	
Category of application:	IEC60079-0	
	Ex IIC Gb	(not for M63x1,5)
	Ex tb IIIC Db IP 66	(not for M63x1,5)
Perm. storage temperature in original packing:	-20° C +40° C	
Degree of protection to IEC/EN 60529:	(fully assembled)	
	M12- M50	IP 66
	M63	IP 54

Type	Operating temperature / °C	Ø 1	L1	L2	L3	Screw-in thread in enclosure / Nm	weight app.
M16x1,5	-55 / +95	21 mm	12 mm	11 mm	4,0 mm	3,3	2,4 g
M20x1,5	-55 / +95	25 mm	13 mm	12 mm	4,0 mm	2,7	4,3 g
M25x1,5	-55 / +95	30 mm	13 mm	12 mm	4,0 mm	3,0	6,6 g
M32x1,5	-55 / +95	37 mm	15 mm	14 mm	5,5 mm	5,0	12,0 g
M40x1,5	-55 / +95	45 mm	15 mm	14 mm	5,5 mm	7,5	36,6 g
M50x1,5	-55 / +95	55 mm	16 mm	15 mm	5,5 mm	7,5	56,6 g
M63x1,5	-20 / +80	72 mm	/mm	12 mm	11,0 mm	7,5	64,5 g

⊕ = Socket head spanner or screw driver, size 8 mm

1.9 Drain plug

ATEX type examination certificate:	PTB 01 ATEX 1128 X	
Marking acc. to 2014/34/EU and standard:	EN 60079-0	
	⊕ II 2 G Ex e II	
Permissible operating temperature range:	-20° C +40° C	
Perm. storage temperature in original packing:	-20° C +40° C	
Degree of protection to IEC/EN 60529:	IP 66 (fully assembled)	
Screw-in thread in enclosure:	M25x1,5	
Test torque:	5,0 Nm	

2 Legend

Caution

This symbol warns of a possible failure. Failure to observe this caution may result in the total failure of the device or the system or plant to which it is connected.



Special conditions:

This symbol indicates that special conditions apply for a safe operation in accordance with the EC Type Examination Certificate / IECEx Certificate of Conformity.

2.1 Safety instructions



The operations must be carried out by electrical suitably trained in hazardous area with knowledge of increased safety explosion protection IEC/EN 60079-14.

All the entries and components listed in these operating and mounting instructions are not suited for use in Zone 0 and Zone 20.

In addition, they may not be used as direct cable entries or seals for flameproof enclosures in potentially explosive atmospheres in Zone 1, Zone 2 and Zone 21, Zone 22.

They shall be used for their intended purpose and shall be in a perfect and clean state.

Prior to mounting, check the entries and components, as well as the screw-in threads of the apparatus into which they are to be mounted to ensure that they are in a perfect state.

The requirements of the IEC/EN 60079-0 and EN/IEC 60079-31 regarding excessive dust deposits and temperature to be considered from the user.

The national safety rules and regulations for the prevention of accidents, as well as the safety instructions included in these operating instructions, that, like this text, are set in italics, shall be observed!

3 Conformity with standards

They have been designed, manufactured and tested according to the state of the art and to DIN EN ISO 9001 and EN ISO/IEC 80079-34.

The apparatus are conform to the standards specified in the EC-Declaration of conformity, enclosed separately.

References to standards and directives in these operating instructions always relate to the latest version. Other additions (e.g. details relating to the year) shall be observed.

4 Field of application

The entries and components covered by these instructions (see Technical Data) are suited for mounting in potentially explosive atmospheres in Zone 1, Zone 2 and Zone 21, Zone 22 accordance with IEC/EN 60079-10-1 and IEC/EC 60079-10-2!

The materials used, including the exterior metal parts, are high quality materials that ensure a corrosion resistance and resistance to chemical substances according to the requirements for use in a "normal industrial atmosphere":


- impact resistant polyamide
- stainless steel

In case of use in an extremely aggressive atmosphere, please refer to manufacturer

5 Application / Properties

All the cable entries and components covered by these operating and mounting instructions are suited for use in enclosures and apparatus in the type of protection "Increased Safety".

Trumpet-shaped cable glands are used for feeding flexible cables into enclosures and apparatus.


 The fitting of seal inserts one inside the other or the interchanging of seal inserts of different entries to reduce the cable opening is not permitted.

Reducing glands can be used to reduce the size of threaded or through holes in enclosures to a smaller thread size.


Blanking plugs are used to seal metric COOPER CROUSE-HINDS cable entries and COOPER CROUSE-HINDS multiple entries.


Screw glands are used to seal unused through and threaded holes.

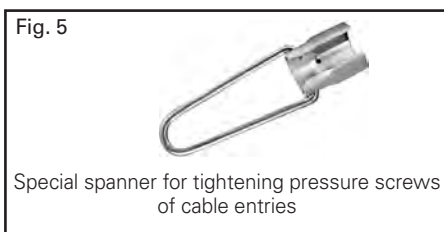
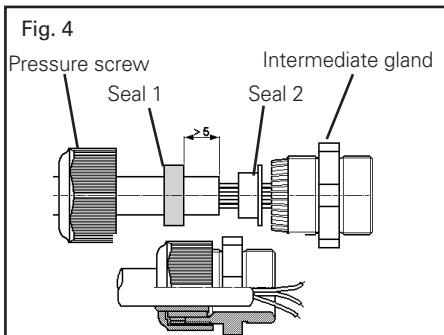
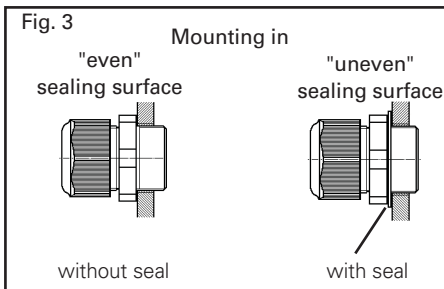
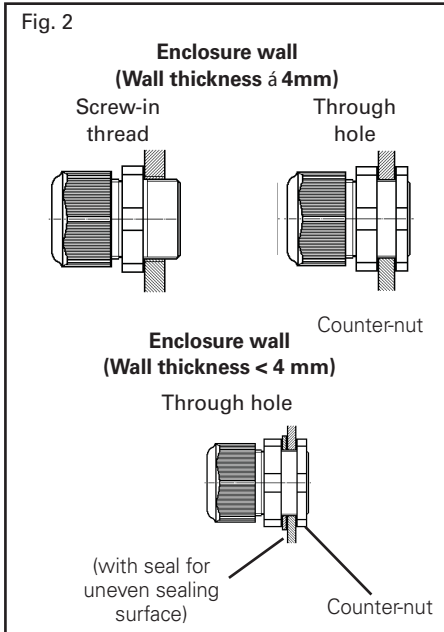
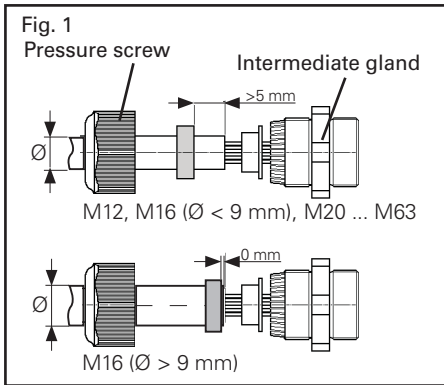
Any condensation in the apparatus can escape via drain plugs (see 6.1, Mounting).

 Applications other than those described are not permissible without a written declaration of consent from Messrs. COOPER CROUSE-HINDS.

 The instructions according to section 7 of the operating instructions shall be observed during operation.

 The sole responsibility with respect to the suitability and proper use of these entry components with regard to the basic conditions of these instructions (see Technical Data) lies with the operator.

 The EC-Type Examination Certificate and any future supplements thereto shall, at the same time, be regarded as supplements to the EC-Type Examination Certificates PTB 99 ATEX 3128 X and PTB 99 ATEX 3101 X.



6 Installation

The relevant national regulations and the generally recognized rules of engineering apply for the installation and operation. (IEC/EN 60079-14).

⚠ The improper installation and operation of enclosures can result in the invalidation of the guarantee.

⚠ Observe the special operational conditions accordance to IEC/EN 60069-14.

⚠ Only fixed cables may be used. The operator shall ensure that an appropriate strain relief is provided. This is not required for trumpet-shaped glands.

⚠ The degree of protection IP66 is only attained if the seals and cable entries are installed correctly.

⚠ Cable entries that are only suited for a low impact energy shall be built into an enclosure in such a way as to protect them from a mechanical impact energy.

6.1 Mounting

⚠ Prior to mounting, ensure that the threads of the entry components match the threads of the apparatus or enclosure.

⚠ If the entries and components are to be screwed directly into the walls, the wall thickness of the apparatus shall be at least 4 mm.

⚠ Counter-nuts shall be used if enclosure walls are less than 4 mm thick. The minimum thickness of the enclosure wall shall be 1.5 mm.

⚠ The use of entry elements with damaged or dirty threads can impair the IP degree of protection.

⚠ Imported Cables and wiring shall be relieved of tensile forces (eg with a cable clamp).

6.1.1 Cable entries (KLE)

The intermediate gland (see Fig. 1) of the cable entries shall be fitted with a suitable tool, e.g. fork, ring or box spanner.

It is mounted directly in the threaded hole or via the through hole of the enclosure (see Fig. 2).

If the sealing surfaces are uneven, seals shall be used between the enclosure wall and the intermediate gland (see Fig. 3).

Counter-nuts shall be used for walls with a thickness of less than 4 mm (see Fig. 2).

Cables are fed in as shown in Fig. 4.

The seal inserts shall be chosen to suit the respective cable diameter (Page 13 Figs. A, B, C and D).

Use COOPER CROUSE-HINDS spanners with a side opening can be used to facilitate the tightening of the pressure screw when the cable entry has been mounted (see Fig. 5).

Order No. GHG 960 1951 R0001 for Set 1 (M12, 16, 20, 25, 32 and 40)

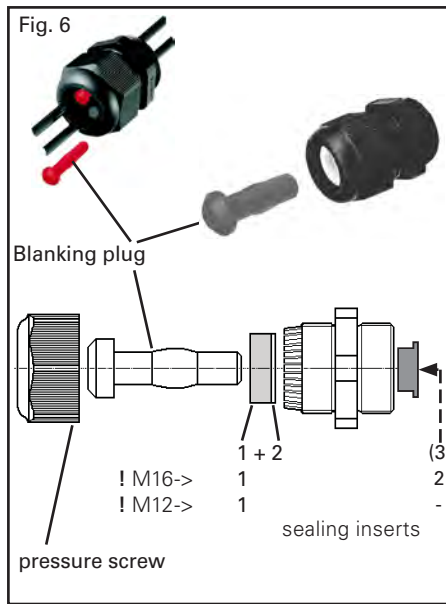
Order No. GHG 960 1951 R0002 for Set 2 (M50 and M63)

To ensure the required minimum degree of protection, the gland body and the pressure cap shall be tightened with the given test torques (see Technical Data).

When tightening the pressure cap, the gland body shall be prevented from turning with a suitable tool, e.g. a spanner.

⚠ Overtightening can impair the degree of protection.

Optionally, cable entries with colour-coded (light blue) pressure screws can be used for intrinsically safe circuits (see main COOPER CROUSE-HINDS catalogue for order numbers).

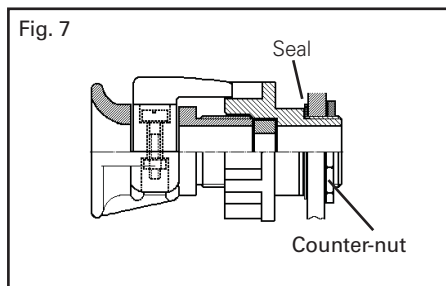


6.1.2 Blanking plugs

⚠ Blanking plugs of the types GGH 960 6107 P**** or GHG 960 1944 R**** may only be used in conjunction with cable entries of the types GHG 960 92** P**** or GHG 960 19** R****.

The following shall be observed when mounting blanking plugs for COOPER CROUSE-HINDS metric cable entries (see Fig. 6):

1. Only the blanking plug associated to the KLE shall be used.
2. When closing the gland with a blanking plug, always use sealing inserts 1+2!
3. The head of the blanking plug shall, as shown in Fig. 6, be on the outside.
4. The blanking plug shall be pushed into the KLE until it reaches the stop.
5. The pressure screw of the KLE shall be tightened down as described in 6.1.1.



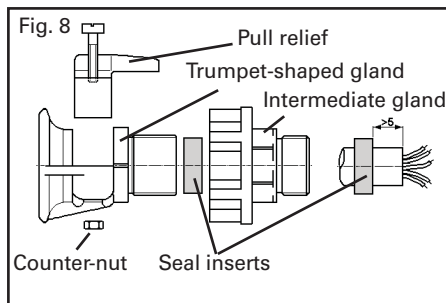
6.1.3 Screw plug

The screw plug shall be screwed tightly into the threaded hole in the enclosure using a suitable tool, e.g. 8 mm socket head spanner or a suitable screw driver.

A counter-nut shall be used for through holes or enclosures that are less than 4 mm thick.

An additional seal shall be used for uneven sealing surfaces.

⚠ In general, the M50 screw plug shall be mounted together with the seal supplied.



6.1.4 Trumpet-shaped gland

A suitable tool, e.g. a fork spanner, shall be used for mounting the intermediate gland in the trumpet-shaped gland in such a way that it cannot twist.

It is necessary to ensure that the gland cannot twist once the cable has been fed in and the trumpet-shaped gland mounted (e.g. by using a counter-nut, see Figs. 7 + 8). A counter-nut shall be used for through holes or enclosures that are less than 4 mm thick. When mounting, a seal shall always be used between the enclosure wall and intermediate gland (see Fig. 7).

The following describes the mounting of the cable in the trumpet-shaped gland, as shown in Fig. 8:

1. Cut out the individual rings of the "onion ring" seal insert to match the respective cable diameter.
2. After feeding in the cable, that has been cut to length and has the seal mounted, into the intermediate gland, screw the trumpet-shaped gland tightly into the intermediate gland to seal off the cable.
3. Then mount the pull relief on the trumpet-shaped gland.

⚠ It is necessary to ensure that there is sufficient pull relief, that damage to the cable is not possible and that the trumpet-shaped gland cannot twist.

6.1.5 Reducing gland

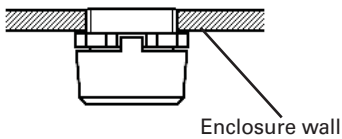
A suitable tool, e.g. a fork, ring or box spanner, shall be used for screwing the reducing gland tightly into the threaded hole in the enclosure.

A counter-nut shall be used for through holes or enclosures that are less than 4 mm thick.

An additional seal shall be used for uneven sealing surfaces.

⚠ Screwing several reducing glands one inside the other to reduce the size of the entry thread is not permitted.

Fig. 9



6.1.6 Drain plug

A suitable tool, e.g. a fork, ring or box spanner, shall be used for screwing the drain plug tightly into the threaded hole in the enclosure.

An additional seal shall be used for uneven sealing surfaces.

The drain plug shall be mounted at the lowest point of the apparatus or enclosure (see Fig. 9).

⚠ The minimum wall thickness may not be less than 4 mm.

Entry components shall be screwed in tightly to ensure the specified minimum degree of protection (see Technical Data for test torques).

⚠ Overtightening can impair the degree of protection.

6.2 Putting into operation

Prior to putting the mounted entry components into operation, the tests specified in the individual national regulations shall be performed.

In addition to this, prior to putting the entries into operation, the correct mounting shall be checked in accordance with these operating and mounting instructions and any other applicable regulations.

⚠ In locations where they are particularly at risk, the entries shall be safeguarded against being torn out of the apparatus or enclosure walls by external mechanical influences (e.g. by fork lift trucks, by knocking or similar).

7 Maintenance / Servicing

⚠ The valid national regulations for the servicing / maintenance of electrical apparatus for use in potentially explosive atmospheres shall be observed (e.g. IEC/EN 60079-17).

The necessary intervals between servicing depend upon the specific application and shall be stipulated by the operator according to the respective operating conditions.

As part of the routine testing, above all, parts on which the explosion protection depends shall be checked (e.g. intactness of entry components and seals).

Pressure screws of cable entries, trumpet-shaped glands of trumpet-shaped cable entries shall be checked at regular intervals to ensure that they are screwed in tightly and, if necessary, they shall be tightened down.

If, in the course of servicing, it is ascertained, that repairs are necessary, section 8 of these operating instructions shall be observed.

8 Repairs / Modifications

Only original COOPER CROUSE-HINDS parts shall be used for carrying out repairs that concern the explosion protection.

⚠ Repairs that affect the explosion protection may only be carried out by COOPER CROUSE-HINDS or by a qualified electrician in compliance with the respective national regulations (e.g. IEC/EN 60079-19).

Modifications to the entry components are not permitted.

9 Disposal / Recycling

The respective valid national regulations for waste disposal shall be observed when disposing of apparatus.

To facilitate recycling of individual parts, parts made of moulded plastic bear the marking for the type of plastic used.

The product range is subject to changes and additions.